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ABSTRACT

The Massachusetts Vocational Curriculum Resource Center (MVCRC) was started in 1980 to serve as the primary vehicle for providing curriculum development assistance to secondary vocational schools and programs in the state. The aim of the study reported here was to evaluate the MVCRC to determine the extent to which it has met its objectives and the impact of the Center's work on vocational programs, and to identify strategies for improving the Center's operation. As part of the evaluation study, a statewide mail survey of 500 vocational educators was conducted, with a return of 200 questionnaires (38 percent). The results of the survey showed that nearly half of all vocational teachers in the state have used the MVCRC, and more than 80 percent have heard of the Center. The survey results also showed that other educators and professionals besides teachers use the MVCRC. Nearly 80 percent of the respondents said they have used curriculum resource materials in the past two years, and the Center was the most important source of useful materials. Eighty-eight percent of respondents found the MVCRC materials quite useful or extremely useful, although home economics teachers were least satisfied with materials. All respondents said the MVCRC was extremely or quite responsive. Other information was gathered through interviews. Interviewees mentioned strengths such as usefulness, high quality staff, and networking activities. Weaknesses pertained to focus, location, and resources. Recommendations for improvement included increased publicity about the resources of the Center, additional resources, and more resources in specialty areas. (KC)

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FINAL REPORT ON THE EVALUATION OF THE MASSACHUSETTS VOCATIONAL CURRICULUM RESOURCE CENTER

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U.S. DEPARTMENT OF EDUCATION
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Executive Summary

I. Introduction

The role of secondary vocational education has become increasingly complex in the last two decades for two reasons. First, the increasing pace of technological change has made it more difficult for vocational schools to succeed in their aim of preparing students for gainful employment in skilled jobs. Second, the aims of secondary vocational education have been expanded to include not only the traditional goal of job preparation but also preparing students for postsecondary advanced technical education.

To help secondary vocational schools with their increasingly difficult tasks, programs have been established to help improve secondary vocational programs. In Massachusetts the primary vehicle for providing curriculum development help to secondary vocational schools and programs has been the Massachusetts Vocational Curriculum Resource Center (MVCRC).

The aim of the study reported here has been to evaluate the MVCRC and specifically to:

1. Evaluate the extent to which the MVCRC has met its objectives;

2. Evauate the impact of the Center's work on vocational programs; and

3. Identify possible strategies for improving the Center's operation in the future.

II. History and evolution of the MVCRC

The MVCRC was founded at the Minuteman Regional Vocational Technical School in 1980. Its general aim has been to provide curriculum resources to vocational educators statewide, and specifically to:

Collect and catalog curriculum resources;

Share information about the materials and services of the Center;

Assist the Division of Occupational Education with research, staff training, and dissemination. . .

Staffing. The Center is staffed by three professionals: a director, a librarian and an inservice coordinator. They are supported by three clerical staff members.

Budget. The Center's budget has grown from $125,000 in 1980-81 to $241,000 in 1986-87. The relatively rapid growth in the Center budget in the last two years is due partially to its new role in the Principles of Technology project and in the Vocational Technical Consortium of the States.

Materials Collection. The Center currently houses a collection of over 4,500 curriculum resource materials. The collection grew fastest between 1981 and 1984, followed by a leveling off in 1985 (though the ebb and flow in growth of the collection has varied by program area). Numbers of requests for information and numbers of materials loaned show a similar pattern, with sharp growth from 1981 to 1984 followed by a leveling off in 1985. The number of items of materials loaned in 1985 was 8,060.

Newsletter. Nineteen issues of the Center's newsletter, "Curriculum Currents" have been issed since 1980. These issues have covered the Center itself, state and

regional vocational education news, and various professional development activities and conferences. The newsletter mailing list numbered 3500 in mid-1986, with another 4,000 or so copies of the newsletter distributed other than via the mail.

Comparsion with other Centers. A comparison of the MVCRC with other similar Centers shows that it differs from them in several respects.

III. Statewide Survey of Vocational Educators

As part of the evaluation study , a survey was conducted of vocational educators statewide, in order to ascertain their views on vocational curriculum resources in general and on the MVCRC in particular. Questionnaires were sent to over 500 individuals randomly sampled from: 1) State Department of Education lists of vocational teachers; 2) MVCRC mailing lists; 4) MVCRC user contact sheets; and 5) membership lists of industrial arts, business office and home economics professional associations. Althogether more than 200 questionnaires were returned for an overall response rate of 38%.

The survey results show that nearly half of all vocational and occupational teachers in the state have used the MVCRC. This illustrates that the MVCRC is successful in reaching its primary constituency, the teachers. The results also show that less than 20% of all teachers have never heard of the MVCRC, which means that four-fifths of all vocational and occupational teachers have at least heard of the Center. The MVCRC is more well known and more utilized by teachers in Vocational Technical schools, particularly those located in Eastern sections of the state. The use of the Center by teachers in the Western sections is difficult to determine due to a low number of returns from those areas. However it does appear that a fairly substantial number of teachers from Western sections have heard of and used the MVCRC, although a number of these teachers

indicated their preference for a curriculum center that would be more centrally located than the MVCRC.

The survey results also show that other educators and professionals besides teachers also use the MVCRC. Nearly one-fifth of the Center's users surveyed indicated that their position is someplace other than a high school. While the MVCRC caters primarily to teachers, many school administrators and non-school professionals also use the Center.

Nearly eighty percent of the survey respondents said that they have used curriculum resource materials in the past two years, and the single most popular source of useful materials was the MVCRC. The only other source of materials that came close to the popularity of the MVCRC was publishing companies.

Eighty-eight percent of respondents found the MVCRC materials quite useful or extremely useful. Only home economics teachers found the materials and services provided by the Center to be less useful than other teachers. Every single respondent said that MVCRC staff was extremely responsive or quite responsive. This clearly illustrates the consistently high level of support provided by members of the Center's staff.

Respondents felt that the MVCRC could best be improved by providing more resources and more up-to-date resources in specific subject areas. Many teachers in all areas chose these responses, but Home Economics teachers had by far the highest rate of selecting these two choices. A large number of write-in responses suggested that lists of what is available in specific areas should be provided.

Many respondents who had not used the MVCRC indicated their desire to be placed on the mailing list, however there were indications that the list has not

been utilized recently. A number of respondents already on the list did not know if they were on the list or not because they had not received information from the Center in some time.

IV. Interviews

Another source of evaluative information came from interviews with 15 key informants around the state. The people to interview were selected in consultation with the project officer and were conducted over the summer of 1986, following an agreed upon interview protocol, which was organized so as to tap, among other things, peoples' views of the strengths and weaknesses of the MVCRC and their ideas on ways to improve its operations.

The most commonly mentioned strengths of the Center pertained to: 1) its general usefulness; 2) the high quality of the Center staff and the services they provide; 3) its role in coordinating and networking activities and information among not only vocational educators, but also the Division of Occupational Education and other agencies.

Comments pertaining to perceived weaknesses of the Center dealt most frequently with: 1) the focus of the Center's activities (some thought it was too narrow, while others thought it too broad); 2) Center facilities and location; 3) resources available to the Center (most thought it needs more resources). Additionally, several people mentioned, as much by way of suggestions for improvement as by way of perceived weaknesses, that they felt the Center should become more active in publicizing its services and engage in more active outreach activities directly to teachers.

The final portion of interviews dealt with people's general views on vocational education curriculum development and on the priority which ought to be placed on strengthening the MVCRC relative to other activities aimed at improving vocational education in the Commonwealth. The general finding from these discussions was that people place a very high priority on vocational education curriculum development (viewing it for example as a vital vehicle for accomplishing other needed improvements, such as staff development).

V. Conclusions and Recommendations

The final chapter of the evaluation report is divided into two sections dealing with conclusions and recommendations. Conclusions deal with both specific MVCRC objectives over the last three years, and the more general role of the MVCRC in improving vocational education curricula. Similarly, recommendations are divided into two parts: specific recommendations and issues which deserve further consideration.

The MVCRC Has Met Its Objectives over the Last Three Years

Our general conclusion is that the MVCRC has succesfully met its five stated objectives over the last three years. The Center has collected and catalogued over 4,500 items of vocational curriculum resources including books, curriculum guides, teaching guides, educational software and other instructional materials. The Center has provided staff training through its workshops, presentations at the annual Professional Development conference, and through assistance provided to vocational educators who have visited the Center and in other indirect ways.

The Center also has provided a variety of networking and communication services. Clear signs of the extent to which the MVCRC has provided a network of

communication for vocational educators are that 1) nearly 80% of respondents to our statewide survey of vocational educators indicated that they knew of the MVCRC, and 2) nearly half of the vocational and occupational teachers in the state have used the MVCRC within the last two years.

The Center has also provided the Department of Education's Division of Occupational Education with research, staff training, and dissemination assistance in connection with products sponsored or developed by the Division.

MVCRC's Contribution to Vocational Education Improvement.

Apart from the specifics of the MVCRC's meeting of its own objectives, a broader question we sought to address was the extent to which the Center has contributed to curriculum and program improvement in vocational and occupational offerings in the state.

There is considerable indirect evidence that the MVCRC has had a positive impact in this regard, for example in our findings that the Center staff were rated highly in our key informant interviews, that several of our key informants viewed the mere existence of the Center as an asset to vocational education in the state, that 88% of our survey respondents who had used the Center rated its materials and services as quite useful or extremely useful, and that survey respondents rated the MVCRC as the source of choice in acquiring useful curriulum resource help.

It seems plausible to infer that such highly rated services have contributed to vocational program improvements. However, when key informants were asked if they could give examples of programs which had been clearly changed as a result of MVCRC services, they tended to give somewhat equivocal asnwers.

We learned of several schools in which the MVCRC had contributed to program improvement, but no instances in which Center services alone had led directly to program improvement. However, the ambiguity of evidence concerning the effect of MVCRC services on vocational program offerings is none too worrisome. From what we know of research on diffusion of innovations, it is entirely appropriate that the MVCRC was not once cited as a direct or immediate source of program improvement, but instead as a starting point, together with a variety of other resources, from which the educators took off to create new curriculum for themselves.

Recommendations. Recommendations, elaborated in the penultimate section of our report, are divided into six specific recommendations and five issues to which we recommend further scrutiny.

The six specific recommendations are prefaced with the proviso that pursuing them likely would require that additional resources be devoted to the work of the Center. The six recommendations are that:

1. The Center's newsletter should be issued on a more regular and frequent basis.

2. The Center needs to adopt a differentiated but more detailed mechanism for publicizing available materials.

3. More resources be devoted to updating the Center collection on an ongoing basis.

4. More attention be given to providing resource support to occupational specialty teachers.

5. More resources be devoted to providing support to teaching of academic skills in vocational schools.

6. The work of the Center in staff development be expanded.

Issues for Consideration. In addition to setting out specific recommendations for improving the Center's operations, we recommend further consideration of five issues:

1. Geographic location of the Center.

2. Mechanisms for coordinating Center activities with Regional offices.

3. Coordination of the MVCRC with other state-sponsored projects such as CBVE.

4. Devoting More Resources to Materials Dissemination.

5. Dissemination of Machine Readable Materials.

Postscript. As a final comment it is suggested that the MVCRC is worth supporting in the future not just because it has done a good job over the last few years, but also because it represents one of the few mechanisms available for providing tangible support to vocational educators, who perhaps even more than other educators at present , seem ill-supported, and often underappreciated in carrying out an important role in the training of the youth of our state.

Preface

The study recounted in this report got off to something of a rocky start. After the rush of preparing to respond to the Division of Occupational Education's Request for Proposals, we were pleased to learn in February 1986 that our proposal had been selected as the winner in the proposal competition. But then the actual signing of the contract for the work of the study was delayed nearly three months, well beyond the half-way mark of the originally intended schedule for the study. And after the contract was signed in May 1986, we were left with little time to organize our mail survey so that it would reach vocational educators before they departed school for the summer. And after getting our survey in the mails, we were faced with the problem of trying to arrange and carry out key informant interviews during the summer when some of the people we sought to interview were hard to reach.

In the end, however, this evaluation study has been a pleasure to do for two quite simple reasons. The first is that the subject of the evaluation, the Massachusetts Vocational Curriculum Resource Center (MVCRC), has turned out to be, in our view and after considerable scrutiny, a well-run and highly effective agency. Evaluation studies are, after all, more pleasurable for the investigators when the balance of findings are more positive than negative.

Yet though our findings regarding the past success of the MVCRC are very largely positive, the second reason for pleasure in the evaluation study is that we feel we have been able to offer some constructive suggestions for making a good agency better. If this does turn out to be the case, the credit for the study should probably go to us, as principle investigators, only in minor degree. Instead the major share of credit for whatever success the study has had, and for whatever improvements in the MVCRC to which it may contribute, should go to the

vocational educators -- numbering literally in the hundreds -- who kindly cooperated in the study.

Most of these people, the vocational educators who generously returned our mailed survey forms, we cannot thank personally or by name. But with regard to others whom we can thank by name, we are pleased to do so. Two people deserve special thanks. John McDonagh, the project officer for both this study and for the MVCRC, was thoroughly cooperative and supportive throughout the inquiry. Carol Lauglin, the director of the MVCRC was similarly helpful, and invariably patient and cooperative in answering our numerous questions regarding the Center, its history, records and multitude of activities.

The second group of people we wish to thank are the other staff members of the MVCRC: Virginia Day, Janet Smizer, Marie Walton, Beverly Bleck and Brita Kegel. They too were unfailingly cooperative to us and aided us and our inquiry in ways large and small.

The third group of people we are pleased to thank are officials of three professional associations who, by providing us with mailing lists, allowed us to include in the study three groups of vocational educators whose views otherwise would not have been adequately represented. These people are: Dr. Peter Meggison of the Massachusetts Business Association, Lorraine Cronin of the Massachusetts Home Economics Association, and Dr. Phillip Tardanico of the Massachusetts Industrial Education Society.

Finally we wish to thank the fifteen people who took the time out of busy schedules to talk with us, often sharing not just their opinions of the MVCRC but of the role and future of vocational education in the Commonwealth of Massachusetts. Each of these fifteen people is listed in Appendix 3. They all kindly took time out of busy work schedules -- or in one case out of a planned vacation day -- so that we could interview them for an hour or more.

Apart from these small words of thanks we can only offer all of these people our hope that their contributions to our inquiry, via this report, will help lead to a brighter future for the MVCRC and thereby to improvements of vocational education in the Commonwealth.

– W.H. and J. Z.

Chapter I

Introduction

Vocational education has been a major part of the educational system of the United States for more than half a century, dating back at least to the Smith-Hughes Act of 1917. Over this interval, the number of secondary students enrolled in vocational education nationwide has risen from less than 1 million to nearly 15 million in 1980 (National Institute of Education, 1981, p. xii). Despite the obvious success that secondary vocational schools have thus had in terms of attracting large numbers of students, the job assigned to these schools has become vastly more complex in the last two decades.

Historically, the prime role assigned to vocational education has been to prepare students for life after schooling in vocations. However, with the passage of the Vocational Education Amendments of 1968, a new task was explicitly assigned to secondary vocational education, namely that of providing students with the academic credentials and skills necessary for enrollment in advanced technical education programs (see Woods and Haney, 1979, 1981, for an analysis of goals for secondary education set out in federal legislation).

At the same time that the goals set out for secondary vocational education have broadened, it has become increasingly difficult for secondary vocational institutions to meet their traditional aim of preparing individuals for gainful employment as skilled workers or technicians. This is because of the accelerating pace of technological change in the job market, with workers and technicians having, on an ongoing basis, to learn and to use new techniques and technologies. The phenomenon of increasing technological change is apparent nationwide but is especially salient to vocational education in Massachusetts, a state whose economy is increasingly bolstered by "high technology" industries.

One mechanism developed to help secondary vocational education institutions meet their increasingly difficult goals has been to establish agencies to systematically collect and disseminate information on instructional techniques, curricula and occupational trends and to provide training, networking services and technical assistance. In this regard, in Subpart 3 of the Vocational Amendments of 1976, the U.S. Congress specifically authorized the provision to the States of funds for improving programs and providing supportive services to secondary vocational education schools (National Institute of Education, 1981, pp. I-15 - I-17).

In the Commonwealth of Massachusetts, the primary vehicle for providing such support to secondary vocational education schools has been the Massachusetts Vocational Curriculum Resource Center (MVCRC). Since 1980, the MVCRC, established at the Minuteman Regional Vocational Technical High School, has served as a central location for the collection and dissemination of vocational education curriculum resources.

The purpose of this report is to describe the background, techniques and results of our evaluation of the MVCRC. The evaluation has been conducted as a result of a Massachusetts Department of Education (MDE) Request for Proposals (RFP-86E). In response to this RFP the Boston College Center for the Study of Testing Evaluation and Educational Policy (CSTEEP) submitted a proposal to the MDE in December 1985. This proposal was selected by the MDE and after a contract was signed in May 1986, the proposed evaluation of the MVCRC was carried out.

The specific objectives of the evaluation were to:

1: Evaluate the extent to which the MVCRC has met its objectives for the Center's last two and one-half years of operation;

2: Evaluate the impact of the Center's activities on curriculum and program improvement in vocational and occupational offerings in the Commonwealth; and

3: Identify strategies for possible improvement of the Center's operations in the future.

The evaluation has been based on a variety of data-gathering and research methods, including:

- interviews with MVCRC staff, and review and analysis of MVCRC records;
- interviews with twenty key leaders and administrators of vocational education in Massachusetts;
- mail surveys to statewide samples of vocational educators; and
- comparison of the MVCRC with similar institutions in other states.

The remainder of this report is organized into the following sections. Chapter II provides a brief description of the history and evolution of the MVCRC. Chapter III describes the methods used in and the results of our statewide survey of vocational educators. Chapter IV recounts our strategy for identifying and interviewing key people in the Commonwealth concerning the MVCRC. It also presents the results of the interviews conducted. The final chapter presents the overall conclusions and recommendations from the evaluation.

Chapter II
History and Evolution of the Massachusetts Vocational Curriculum Resource Center

Since July 1980, the Massachusetts Vocational Curriculum Resource Center (MVCRC), located at the Minuteman Regional Vocational Technical High School has served as an agency for the collection and dissemination of curriculum resources to vocational educators throughout the Commonwealth of Massachusetts. Though the RFP which led to this evaluation suggested a focus on only the last three years of work by the MVCRC, a brief review of the short history of the Center may be helpful.

First it is worth noting that the MVCRC is not the first statewide center founded in the Commonwealth of Massachusetts for the dissemination of vocational curriculum resource materials. In the 1970s there existed something called CEDIS, standing for the "Career Education Dissemination Information System." This system, according to vocational educators with whom we talked, who remembered it, was largely organized around microfilm technology. Materials were disseminated by this system in the form of microfilm documents and school-based contact people for the system (referred to as linkers by one of our informants) were each provided with a microfilm reading machine. Whatever the history and success of the CEDIS effort (matters we have not tried to trace), the system was dismantled around 1978.

As already mentioned the Massachusetts Vocational Curriculum Resource Center (MVCRC) itself was founded in 1980. Several factors have been mentioned as motivating its founding. First, state vocational education officials were concerned that it was simply not effective to have vocational educators in individual schools working in isolation to develop curriculum. Second, it was felt that there

ought to be some mechanism for linking local curriculum development work here in Massachusetts with the similar national efforts and resources. Third, there was a concern that when state officials might review a vocational education program and find it wanting, they ought to be able to refer program staff to a place where they could get curriculum development help. A final consideration which must have influenced the founding of the MVCRC, though this was not a factor mentioned by any of the officials with whom we talked, was that in 1976, the U.S. Congress, in amending vocational education legislation, specifically authorized the use of federal funds by the states for providing supportive services to secondary vocational education schools.

Whatever, the exact motivations, in November 1979 the State Division of Occupational Education did issue a request for proposals (RFP) for the founding of a center aimed at providing curriculum resources to vocational educators statewide. In a first round of competition, none of the proposals received by the state were judged satisfactory, so a second round of competition for the new center was held and as a result, the Minuteman Regional Vocational Technical School was awarded funds by the Division of Occupational Education to establish the MVCRC. In 1983, a second RFP was issued by the Division for the managment of the Center and Minuteman was again selected as the contracting agency to manage the Center.

The current MVCRC brochure describes the Center as follows:

> The Massachusetts Vocational Curriculum Resource Center is a statewide program improvement effort directed at making quality curriculum resources available to vocational educators in Massachusetts. . . . the Center operates a free-loan reference library and offers inservice training in the areas of curriculum design, development and modification.
> (The MVCRC: An Introduction, 1986, p. 3)

The same brochure describes the services of the Center as including the following:

- a lending library of print and audio-visual materials
- dissemination of selected Massachusetts developed materials
- workshops and inservice training
- preview of software
- a quarterly newsletter
- computerized data base searching
- an information and referral service

(The MVCRC: An Introduction, 1986, p. 5)

These have been the basic goals and general objectives of the MVCRC since its founding in 1980. However, a review of the specific objectives of the MVCRC over the last three years indicates how the general goals and objectives of the Center have been expanded in the last two years:

Objective	FY '83-'84	FY'84-'85	FY'85-'86
1. To collect and catalog vocational curriculum resources	X	X	X
2. To provide staff training	X	X	X
3. To continue the network and communication system . . . to share information about the materials and services of the Center and other program improvement efforts of the DOcEd	X	X	X
4. To assist the DOcEd with the research, staff training and dissemination phase of products sponsored/ developed by the Division. . .	X	X	X
5. To provide support services for the technical committees established by the DOcEd . . .			X
6. To encourage the use of the . . . Principles of Technology Project.			X
7. To join the Vocational Technical Consortium of States . . .			X

This brief summary of the specific objectives of the MVCRC may make it appear that there was a sharper change in the FY '85-'86 objectives than was in fact the case. Though the actual numbers of specific objectives mentioned in the MVCRC proposals to the state did grow from four in FY'83-'84 and FY '84-'85 to seven in FY ' 85-'86, the three "new" objectives in the latter year are in fact simply an elaboration of the more general older objectives, through support services and two special projects, namely the Principles of Technology Project the Vocational Technical Consortium of States (V-TECS).

In conjunction with this elaboration of MVCRC objectives in recent years, the Center has seen a gradual evolution in other of its aspects, including staffing, budget, newsletter, and the Center' s materials collection. Before launching into the methods and results of our evaluation of the Center, it is useful to briefly recount how the Center has evolved in these areas.

Staffing. The current staff of the Center consists of a director, Carol Laughlin, a librarian, Virginia Day, an inservice coordinator, Janet Smizer, and three support staff members (Beverly Bleck, Marie Walton, and Brita Kegel). Carol Laughlin has been the director of the Center since its inception in 1980. Before coming to the MVCRC, Ms. Lauglin had worked in curriculum development in the Oklahoma State Department of Vocational-Technical Education. The MVCRC started in 1980 with two professional staff members and two clerical staff members. A third professional staff member was added in 1981, and a part-time clerk was added in 1983-84. The current Center Librarian, Virginia Day, joined the staff of the Center in October 1982. The present Inservice Coordinator, Janet Smizer joined the Center in November 1983.

In this brief recounting of the staffing of the Center, it should be pointed out that since the staff is small, the roles of professional staff members overlap somewhat more than might be inferred from their titles. Thus though, Janet Smizer

is the Inservice Coordinator, Carol Lauglin and Virginia Day are often involved in both planning and delivery of workshops. Also, it seems apparent that since the Center has taken on new specialized projects (specifically, V-TECS and the Principles of Technology Project), the Director has had to withdraw somewhat from the day-to-day operations of the Center since she has key responsibility for these new projects.

Budget. With its growth in terms of both staff and special projects, the Center has naturally seen an increase in its budget over the last six years, roughly as follows:

Fiscal Year	Approximate Budget
1980-81	$ 125,000
1981-82	$ 135,000
1982-83	$ 145,000
1983-84	$ 136,000
1984-85	$ 148,000
1985-86	$ 199,000
1986-87	$ 241,000

The funds used to support the MVCRC over the last six years have been entirely federal monies allocated for this purpose by the Division of Occupational Education.

Materials collection. The materials collection of the MVCRC is described in the current Center catalog as follows:

> . . . the Center collects curriculum guides and support materials and makes them available to Massachusetts educators. The collection includes curriculum guides, outlines, teacher materials, student texts and workbooks, courses of study and supplementary teaching aids to support curriculum in all vocational areas. Materials are also available in vocational education for special populations, bilingual vocational education, educational equity, curriculum development and instructional management. . . . The Center maintains a collection of software for the Apple II series microcomputer.
> (The MVCRC: An Introduction, 1986, p. 7)

In order to help provide access to this collection, the Center publishes a catalog listing items in the collection approximately once per year, with copies distributed to each vocational technical school in the Commonwealth and to State Department of Education Regional Offices.

A survey of the four annual catalogs of materials from 1981-82 to 1985 shows that the number of items available for loan from the MVCRC collection has grown considerably over time. The number of items listed in each catalog and the percentage increase from the previous year are:

YEAR	No. of items listed	Percentage increase from previous year
1981-82	1,972	-
1982-83	2,939	49%
1983-84	4,234	44%
1985	4,590	8%

The size of the materials collection grew dramatically from 1981 through 1984, but leveled off considerably in 1985. This sudden change in the growth of the collection was due to space limitations at the MVCRC and due to an effort to remove outdated materials and to replace them with new ones. However a cursory review of the dates of materials in the 1985 catalog suggests that while the collection has been growing, some older materials have not been removed. Many of the materials in the 1985 catalog date back to the 1970's. Our informants have said that a process of replacing older materials with more recent ones has been initiated, but we did not determine to what extent outdated materials have been removed from the collection. Also, while the MVCRC budget increased in FY 84-85, the amount of the budget for material acquisition actually decreased from $7,000 to $6,000. The VTECS and Principles of Technology projects accounted for much of the FY 84-85 budget increase. If space problems do exist at the Center, as interviews with the staff have suggested, it may be practical to remove more of the

older materials from circulation and to replace these materials with more current ones if they are available.

The MVCRC collection consists of materials in a large number of areas. We identified the 30 areas that had the most materials listed in the 1985 catalog and ranked them according to the size of the collection in each area. We then compared the number of materials in each area listed in the 1985 catalog to the number of materials in each area listed in each of the three previous catalogs. This allowed us to see how the MVCRC collection has grown in each area.

Table 2.1 shows the 30 areas with the largest number of materials, the number of materials listed in each area in the four catalogs, and the percentage increase in the number of materials in each area from the previous year.

TABLE 2.1 Number of Materials in the MVCRC collection by Year and by Area.

(The numbers in parentheses are the percentage increases in the number of materials from the previous year)

		CATALOG		
AREA	1981-82	1982-83	1983-84	1985
Machinery/Electrical	179	253 (41)	343 (36)	375 (9)
Vocational Education	98	246 (151)	330 (34)	365 (11)
General Education	88	140 (59)	230 (64)	255 (11)
Business	82	118 (44)	195 (65)	224 (15)
Special Education	98	124 (27)	204 (65)	222 (9)
Automotive	89	121 (36)	141 (17)	172 (22)
Home Economics	41	58 (41)	153 (164)	168 (10)
Occupational Education	97	114 (18)	152 (33)	166 (9)
Curriculum Development	63	90 (43)	133 (48)	149 (12)
Computers	36	82 (128)	142 (73)	145 (2)
Food/Culinary Arts	36	62 (72)	123 (98)	141 (15)
Health	70	93 (33)	106 (14)	122 (15)
Word Processing	35	68 (94)	110 (62)	114 (4)
Metal	49	51 (4)	103 (102)	112 (9)
Agriculture	41	55 (34)	90 (64)	106 (18)
English	66	78 (18)	95 (22)	96 (1)
Construction	58	76 (31)	86 (13)	84 (-2)
Clothing/Cosmetology	29	45 (55)	68 (51)	83 (22)
Child Care	25	37 (48)	74 (100)	83 (12)
Printing	23	48 (109)	67 (40)	70 (4)
Heat/Air Conditioning	41	50 (22)	64 (28)	70 (9)
Drafting	30	46 (53)	56 (22)	65 (16)
Safety	4	34 (750)	56 (65)	63 (13)
Carpentry	22	34 (55)	54 (59)	62 (15)
Energy	42	54 (29)	56 (4)	52 (-7)
Marketing	24	25 (4)	46 (84)	51 (11)
Math	22	30 (36)	44 (47)	49 (11)
Masonry	22	35 (59)	49 (40)	47 (-4)
Plumbing	20	23 (15)	38 (65)	43 (13)
Commercial Art	14	33 (136)	39 (18)	39 (0)
TOTAL COLLECTION	1,972	2,939 (49)	4,234 (44)	4,590 (8)

The number of materials available in the Machinery/Electrical area has consistently been the highest of all areas, and has more than doubled from 1981-82 to 1985. The number of materials in the Vocational Education area has consistently been

the second highest area. The number of materials in the Voc Ed area increased by 151% from the first to the second catalog. Other areas with greatly increased collections from the first to the second catalog were Computers (128% increase), Word Processing (94% increase), and Printing (109% increase).

From the 1982-83 to the 1983-84 catalog the largest increases in the size of the collection were in Home Economics (164% increase), again in Computers (73% increase), in Metals (102% increase), and in Food and Culinary Arts (98% increase). Ninety new items were added to the collection in the areas of Machinery/Electrical and General Education.

The change in the size of the collection from 1983-84 to 1985 was much more subtle. The largest percentage increases in the number of materials occured in the Automotive and Clothing/Cosmetology areas (22% increases each). The size of the collection increased by about 30 items each in the Machinery/Electrical, Vocational Education, and Business areas. The number of materials in all other areas increased less than this, and a few areas even had fewer materials in 1985 than in the previous year.

Also of note is the absence of Industrial Arts materials from the list of 30 areas. The MVCRC does not have many materials in this area. This is due in part to a lack of good Industrial Arts materials, as cited by interviewees. Also, many of the materials used in IA are not classified as such, but are included under other categories.

The results reported in Table 2.1 present a picture of vigorous growth of the MVCRC collection in many areas between 1981 and 1984, followed by a sudden leveling off of new acquisitions in most areas in 1985.

According to Center records, the number of requests for materials and number of materials loaned from the collection have increased roughly as follows over the last six years:

Year	No. of Requests	No. of Materials Loaned
1981	700	2400
1982	1620	5100
1983	1700	7100
1984	1840	8040
1985	1880	8060

These figures indicate two general trends. First, while there was a very sharp increase in the numbers of requests and materials loaned in the first two years of the Center's operation (with both requests and materials loaned doubling from 1981 to 1982), there appears to have been a clearcut leveling off of both in more recent years with numbers of requests and numbers of materials loaned increasing only 2% and 0.2%, respectively from 1984 to 1985. This pattern is, by the way, a classic example of the the sort of exponential curve found in studies on the diffusion of innovations (Rogers, 1983, p.204), with rates of growth (or adoptions) increasing rapidly initially, and then leveling out as the innovation matures and as it begins to saturate the market of potential adopters. Upon seeing these figures, an immediate question thus arises as to whether the MVCRC has begun to saturate the market -- that is to reach all of the vocational educators in the Commonwealth who might use its services. This is an issue on which our statewide survey, reported in Chapter III, sheds considerable light.

The second point apparent from the above data is that as the materials collection has increased, the Center has apparently been able to respond to requests for information with a wider variety -- or at least greater number -- of materials. Thus the ratio of materials loaned to requests has tended to increase over the last six years; from 3.4 in 1981, to 3.1 in 1982, to 4.2 in 1983, to 4.4 in 1984 and to 4.3 in 1985.

Newsletter. Nineteen issues of the MVCRC's quarterly newsletter "Curriculum Currents" have been issued since the Center began in 1980 (eighteen regular issues, and one undated "special edition," apparently issued in 1981). The newsletter has been issued on a somewhat irregular basis, with four issues dated January, nine issues dated April, May or June and five issues dated September, October or November. In size, the "Curriculum Currents" newsletter has varied from a small single page edition dated June 1985, to a six-page edition, dated November 1982. Most issues have been four pages.

In terms of content, the various issues of "Curriculum Currents" have varied somewhat. The most common sort of coverage has been, naturally, of the MVCRC itself; concerning for example, its services, new acquisitions, workshops, staffing and details about how educators can get access to MVCRC materials and services. In addtion, however, the newsletter often contains information about matters of related interest, for example, the annual Occupational-Vocational Professional Development Conference held at Montachusett Regional Vocational High School and Fitchburg State College (usually in June), other professional meetings of likely interest to vocational educators, news from one or more of the six educational regions of the Commonwealth, articles on special topics and an occasional book review.

Though data are not available on exactly how the MVCRC newsletter mailing list has grown over the last six years, the mailing list, as of May 23, 1986, contained 3483 names and addresses. In addition to the direct mailing of the newsletter, however, additional copies of the newsletter are provided to regional team leaders, superintendent-directors of vocational technical schools, and other key leaders of vocational education in the Commonwealth, so that the number of copies of "Curriculum Currents" actually distributed is far in excess of the number of names and addresses on the mailing list. Thus the actual press run for "Curriculum

Currents" has reportedly run as high as 8000. Additionally, as we explain in the next chapter, many of the vocational educators randomly surveyed as part of this evaluation effort expressed a desire to receive copies of the MVCRC newsletter in the future.

We also compared the MVCRC with three other curriculum resource centers around the country, in order to see if differences existed in the level and types of curriculum support in other states. We chose to contact the Iowa Curriculum Assistance System (ICAS), the Instructional Materials Laboratory at Ohio State University, and the Maryland Vocational Curriculum Research and Development Center.

Unlike the MVCRC, all of the other three out-of-state curriculum centers are located on the campuses of large universities. The ICAS enjoys support from and cooperation with the Iowa State University system, while the Ohio State and Maryland centers function independently of the universities they are located in.

Direct comparison between the Ohio State Center and the others is not possible due to the considerable differences in function, size and budget. The Ohio State Center primarily develops and sells instructional materials, while the other centers, including the MVCRC, primarily just distribute materials. The Ohio State Center budget is nearly three times that of the other centers ($565,000 in FY 86). In addition to its material development role, the Ohio State Center also develops and administers the state vocational achievement testing program. For these reasons we will compare the MVCRC only with the Iowa and the Maryland centers.

We have collected the following information about each center, which can be compared with the MVCRC: date of inception, size of collection, number of materials loaned, description of newsletter, number of staff, annual budget, services offered and vocational areas served.

Table 2.2 below summarizes the date of inception, the size of the collections, the number of materials loaned in 1985, newsletter description, number of staff and the annual budget for the MVCRC, and for the Iowa and Maryland centers.

TABLE 2.2: Comparison of Three State Curriculum Resource Centers

	MVCRC	ICAS	Maryland
Year of inception	1980	1981	1977
Size of collection	4,590	3,200	21,800 + 1,100 media units
Newsletter	quarterly 2-4 pages	none	quarterly 12 pages
Staff: full-time	6	3	6
students	0	2	22
Budget FY 86	$241,000	$102,740	$200,000

The Maryland center provides many services similar to the MVCRC, except that the Maryland center does not sponsor and organize workshops, which is an important part of the function of the MVCRC. The Maryland center develops and disseminates V-TECS materials. The MVCRC began disseminating V-TECS materials in 1985-86 and will be developing materials for V-TECS in 1986-87. The Maryland center does not support Business and Office education, while the MVCRC has many Business and Office materials available. The MVCRC and the Maryland center provide very much the same types of materials.

It is interesting to note that the operating budget of the Maryland center is lower than for the MVCRC. In part this is due to the emphasis on development of new workshops by MVCRC staff, which has been a substantial cost item in the MVCRC budget the last two years. Also, the Maryland center uses much student

help, presumably at work-study rates, which would cost considerably less than using only salaried employees.

The Iowa center is a more modest operation with a narrower focus than either the MVCRC or the Maryland center. The ICAS only provides materials in three areas, Agriculture, Cooperative Education, and Business Education. They also provide only teacher curriculum guides and video cassettes, while both the MVCRC annd the Maryland center also provide many other types of curriculum materials. The Iowa center does not publish catalogs or a newsletter, does not develop any materials, and has a smaller staff than the other centers. The ICAS does provide curriculum assistance and curriculum updating workshops.

All of the centers we reviewed are members of the NNCCVTE, the National Network of Curriculum Coordination for Vocational Technical Education, and are members of the appropriate regional Curriculum Coordination Networks.

The last few pages have provided an overview of the resources of and the services provided by the MVCRC. Additional information on the services provided by the Center (e.g. topics of workshops, numbers of people attending and results of workshop evaluation forms) are available in the annual descriptive reports prepared by the Center. However, we hope that this general overview of the Center and its activities provide a useful backdrop to the results of our evaluation of the Center.

CHAPTER III
Statewide Survey of Vocational Educators

This chapter describes the methods used to collect survey data from vocational educators statewide and reports the results of the survey. The main results are presented in summary tables in this chapter and more detailed statistical results of the survey are included in Appendix 2.

The chapter is divided into eight sections. The first section discusses the sampling strategy used to target questionnaire respondents, the number of surveys sent out and the response rate, and the representativeness of the responses that we received. The second section describes how familiar respondents were with the MVCRC and what percentage of respondents have used the Center. The results are presented broken down by vocational or occupational area, by type of high school, and by geographic region.

The third section presents characteristics of MVCRC users by type of school, by job title, by vocational or occupational area, and by geographic region. The fourth section reports the number of respondents who have used curriculum resource materials in the past and how many of them found the MVCRC the source of the most useful materials.

Section five presents the ratings of the MVCRC by respondents in terms of the Center's usefulness and responsiveness. Section six describes what respondents said as to how the MVCRC can be improved, reported by vocational or occupational area. Section seven discusses use of the MVCRC mailing list. And section eight summarizes the main results of the questionnaire portion of the evaluation.

3.1 SAMPLING AND RESPONSE RATE

Two different populations of vocational educators around the state were sampled. The first population sampled was the group of vocational and occupational education teachers working in secondary schools. The second population sampled was the group of educators who have used the MVCRC. The two samples certainly overlap, but allow for two different types of results to be reported. The random sampling of teachers from around the state allows us to report approximate percentages of teachers who have used the MVCRC and some of the characteristics of teachers statewide. The sampling of users from MVCRC lists allows us to report the characteristics of MVCRC users who include teachers but also include other educators.

Ideally, the random sample of teachers should be drawn from a complete list of vocational and occupational teachers around the state. However such a list was not available. We therefore had to sample from several different sources in order to obtain responses from a representative group of teachers. This sample included teachers sampled from vocational teacher files at the Massachusetts Department of Education headquarters in Quincy, and teachers selected from mailing lists provided by the Massachusetts Industrial Education Association, the Massachusetts Business Education Association, and the Massachusetts Home Economics Association. The vocational teacher files contained the names of teachers who taught in vocational programs only, and did not include many occupational educators. This is why we also sampled the mailing lists of the Industrial Arts, Business and Home Economics associations. While these three mailing lists certainly do not include all teachers in those areas, they were the best available source of names with home addresses. We needed home addresses for these teachers because we were only able to obtain these lists at the beginning of

the summer, after the end of school. A total of 398 teachers were sampled from the different sources.

The second sample included educators sampled from the MVCRC individual mailing list and from MVCRC user contact sheets on file at the MVCRC. We wanted to get a cross-section of the different types of educators that have used the Center, so we adopted a strategy to sample three different sources of users. There are more than 3,000 names on the MVCRC mailing list, and we sampled approximately one out of 35 names. We also sampled from two different files of contact user sheets, one a file of recent users and the other a file of users back to 1980. Again we sampled approximately one out of 35 names. A total of 160 names of MVCRC users were sampled.

Our original proposal called for 400 questionnaires to be sent out, and we projected a 40 to 50 percent response rate with some follow-up, or 160 to 200 responses. However the timing of the survey, which was sent out during the last two weeks of school, did not lend itself to follow-ups. We therefore decided to oversample beyond the 400 proposed surveys in order to avoid a follow-up and still get the proposed number of survey responses. A total of 558 questionnaires were sent to the various target groups and 208 of these were filled out and returned by the recipients. Thirteen surveys were returned by the post office as undeliverable, or returned by recipients who had retired and felt the questionnaire was not appropriate for them. Our overall response rate was therefore 38.2%, and we actually surpassed our goal of 160 to 200 total responses.

The questionnaire used to survey the sampled vocational and occupational educators was developed with help from Mr. John McDonagh of the Department of Education Vocational Division and Ms. Carol McLaughlin, director of the MVCRC. A draft of the questionnaire was piloted at the MVCRC by administering it to several users who walked in to use the Center. Ms. Virginia Day, librarian at the MVCRC,

solicited some very useful suggestions from users who filled out the pilot questionnaire, and these suggestions were incorporated into the final form. A copy of the final questionnaire and cover letter is attached in Appendix 1.

Table 3.1 below shows the number of surveys sent out, the number received and the response rate separately for each of the different target groups.

TABLE 3.1: Populations sampled and response rate

Population	# Sampled	# Valid Responses	# Undel. Surveys	Response rate (%)
Vocational Teachers	298	119	1	40.1
MVCRC mailing list	95	30	3	32.6
MVCRC user contact sheets	65	28	3	45.2
Ind. Arts mailing list	36	13	2	38.2
Bus/Office mailing list	38	9	2	25.0
Home Ec. mailing list	26	8	2	33.3
Unidentified		1		
TOTAL	558	208	13(*)	38.2

(*) Includes three surveys returned blank because recipients have retired.

The response rate is relatively even across all target groups except Business/Office, which is underrepresented.

In our sampling strategy we were concerned with selecting teachers in all of the different vocational/occupational teaching areas. We attempted to sample the number of vocational teachers in each area proportional to the total number of teachers in that area in the state. Since the vocational teacher files at the State Department of Education did not include occupational education teachers in

business/office, industrial arts and home economics, we utilized the mailing lists of the professional organizations to sample teachers in these occupational areas. However since our emphasis was on vocational teachers, we undersampled teachers in the business, industrial arts and home economics areas.

Table 3.2 below shows the number of responses we received from randomly selected teachers broken down by vocational/occupational teaching area. The table also shows the total number of teachers in each area in the state and the percentage of teachers in each area that responded to our survey.

TABLE 3.2: Randomly selected teachers by vocational/occupational teaching area.

Area	Total no. who responded	Total no. in state(*)	Percent represented among respondents
Agriculture	3	124	2.4%
Distributive Ed.	4	122	3.3%
Health	9	105	8.6%
Home Economics	20	1,099	1.8%
Business/Office	8	1,689	0.5%
Technical	9	163	5.5%
Trade & Industrial	77	2,371	3.2%
Industrial Arts	13	1,209	1.1%
TOTAL	149	6,882	2.2%

(*) Data supplied by Mr. John McDonagh, DOE Division of Occupational Education.

Table 3.2 shows that the overall sampling rate of vocational/occupational teachers was 2.2%. The Home Economics, Business/Office and Industrial Arts

areas are underrepresented in our sample when compared to the total number of teachers in each of those areas in the state. This is due in part to the somewhat lower response rate among those three groups, but primarily because our focus was on vocational teachers rather than on occupational teachers.

Furthermore the mailing list obtained from the Massachusetts Business Education Association included, unknown to us, many people who were not secondary business/office teachers. Six of the nine respondents selected from this list were post-secondary educators who themselves did not feel that the questionnaire was appropriate for them. As a result the number of business/office secondary teachers in our sample is very small, and any generalizations to this population would be inappropriate.

The following sections describe selected results of the survey. The particular analyses presented here were chosen to illuminate the main questions about the use and effectiveness of the MVCRC. A complete breakdown of questionnaire responses is provided in Appendix 2.

3.2 FAMILIARITY WITH AND USE OF THE MVCRC

We can estimate the familiarity with and use of the MVCRC among secondary vocational and occupational teachers by reporting the results of the questions "Have you ever heard of the MVCRC?" and "Have you ever used the MVCRC?" for randomly selected teachers in our sample. Table 3.3 below shows the number and percentage of teacher responses to each question reported by population sampled.

TABLE 3.3: Rates of Familiarity with and use of MVCRC by population sampled.

MVCRC users sampled from the MVCRC mailing list and from contact sheets are not included in this table.

(Percent of total responses of each group is shown in parentheses)

Population	# that have never heard of MVCRC	# that have heard of but not used MVCRC	#that have used MVCRC	TOTAL
Vocational teachers	19 (16.0)	41 (34.5)	59 (49.6)	119
Ind. Arts mailing list	4 (30.8)	3 (23.1)	6 (46.2)	13
Bus/Office mailing list	8 (88.9)*	1 (11.1)	-	9
Home Ec. mailing list	3 (37.5)	1 (12.5)	4 (50.0)	8
TOTAL	34 (22.8)	46 (30.9)	69 (46.3)	149

(*) The Business/Office educators who responded to the survey were mostly not secondary teachers: 6 to 9 were community college instructors. These six respondents will not be included in further tables.

Nearly half of all randomly sampled secondary teachers have used the MVCRC. This is an important result, showing the widespread use of the MVCRC by teachers. This percentage may overrepresent MVCRC use if the survey respondents tended disproportionately to be MVCRC users. Our survey questionnaire was designed to minimize this possibility by not mentioning the MVCRC in the cover letter and by asking about general use of curriculum materials before asking specific questions about use of the MVCRC.

The results reported in Table 3.3 can be disaggregated by vocational area. Table 3.4 below shows the rates of familiarity with and use of the MVCRC reported for all randomly selected teachers by their vocational or occupational area.

TABLE 3.4: Rates of familiarity with and use of MVCRC for SampledVocational and Occupational Teachers, by Area.

MVCRC users sampled from the MVCRC mailing list and from contact sheets are not included in this table.

(Percent of total responses of each group is shown in parentheses)

Area	# that have never heard of MVCRC	#that have heard of but not used MVCRC	#that have used MVCRC	TOTAL
Agriculture	1 (33.3)	-	2 (66.7)	3
Distributive	1 (25.0)	1 (25.0)	2 (50.0)	4
Health	2 (22.2)	2 (22.2)	5 (55.6)	9
Home Economics	5 (25.0)	6 (30.0)	9 (45.0)	20
Business	3 (37.5)	2 (25.0)	3 (37.5)	8
Technical	1 (11.1)	4 (44.4)	4 (44.4)	9
Trade & Industrial	11 (14.3)	28 (36.4)	38 (49.4)	77
Industrial Arts	4 (30.8)	3 (23.1)	6 (46.2)	13
TOTAL	28 (19.6)	46 (32.2)	69 (48.3)	143

Among all vocational and occupational teachers less than 20% never heard of the MVCRC, and among Trade and Industrial teachers this figure is 14%.

The familiarity with the MVCRC can also be reported by other variables of interest. Two of these are by the type of high school that teachers are from, and by the geographic region. Table 3.5 below shows how many vocational and occupational teachers are familiar with and have used the MVCRC, reported by type of high school. Schools that do not have vocational programs, and are therefore not listed in the blue Directory of Massachusetts Vocational Schools, are categorized as "Other High School". Teachers in occupational education whose schools do not have vocational programs are in this category.

TABLE 3.5: Rates of Familiarity with and use of MVCRC by school type

MVCRC users sampled from the MVCRC mailing list and from contact sheets are not included in this table.

(Percent of total responses of each group is shown in parentheses)

Type of School	# that have never heard of MVCRC	# that have heard of but not used MVCRC	# that have used MVCRC	TOTAL
Vocational	8 (11.4)	21 (30.0)	41 (58.6)	70
Comprehensive	9 (22.5)	16 (40.0)	15 (37.5)	40
Town Vocational	5 (25.0)	7 (35.0)	8 (40.0)	20
Other High School	5 (45.5)	1 (9.1)	5 (45.5)	11
TOTAL	27 (19.1)	45 (31.9)	69 (48.9)	141

Two responses are missing from this table, due to an unknown school type.

Table 3.5 shows that teachers at Vocational Technical Schools are more familiar with the MVCRC and a greater percentage have used the MVCRC than teachers at other types of high schools. Nearly 60% of responding teachers at Vocational Technical schools said that they have used the MVCRC, and only 11% said that they never heard of the Center.

Table 3.6 below shows the rate of familiarity with and use of the MVCRC broken down by the six geographic regions in the state.

TABLE 3.6: Rates of Familiarity with and use of MVCRC by region.

MVCRC users sampled from the MVCRC mailing list and from the contact sheets are not included in this table.

(Percent of total responses of each group is shown in parentheses)

Geographic Region	# that have never heard of MVCRC	# that have heard of but not used MVCRC	# that have used MVCRC	TOTAL
1. Grt. Boston	4 (14.3)	8 (28.6)	16 (57.1)	28
2. North East	9 (29.0)	13 (41.9)	9 (29.0)	31
3. South East	5 (15.2)	7 (21.2)	21 (63.6)	33
4. Worcester Area	3 (21.4)	7 (50.0)	4 (28.6)	14
5. Springfield Area	2 (10.0)	7 (35.0)	11 (55.0)	20
6. Western Mass	4 (28.6)	2 (14.3)	8 (57.1)	14
TOTAL	27 (19.3)	44 (31.4)	69 (49.3)	140

Three cases are missing from Table 3.6 due to unknown region.

Table 3.6 shows that the rate of use of the MVCRC by teachers is highest in regions 1 and 3, Greater Boston and the South East. In these two regions, 37/61 (61%) of all teachers responded that they have used the MVCRC. The lowest reported rate of use is in regions 2 and 4. In these two regions, North East and Worcester, 13/45 of the teachers (29%) said that they used the MVCRC. In one particular vocational school in region 2, 3 out of 5 teachers (60%) who returned the survey said that they never heard of MVCRC. Also, no vocational teachers from one Central Region school responded to the survey, even though seven were sent questionnaires.

The number of returns from Western regions (Regions 4, 5 and 6) is too low to make an accurate determination of familiarity with MVCRC. It does appear, however, that a substantial percentage of teachers in the Western part of the state have have heard of and used the MVCRC. This is a positive and somewhat suprising finding, given the Eastern location of the Center in Lexington.

3.3 CHARACTERISTICS OF MVCRC USERS

This section profiles the other population sampled, which is the group of MVCRC users identified from the MVCRC individual mailing list or from contact sheets kept at the MVCRC. We sent a total of 160 surveys to randomly selected users in this group. We received 58 responses and 6 surveys were returned as undeliverable, for a response rate of 37.7% among this group. These respondents represent about a 1% sample of all MVCRC users.

Table 3.7 shows the number and percentage of sampled MVCRC users that work in the different types of schools. Respondents who work in schools not listed in the Vocational School Directory are categorized as "Other High School", and

respondents who work at a place other than a school are categorized as "Non-High School".

TABLE 3.7: Responding MVCRC Users by School Type

This table includes only respondents who were randomly selected from MVCRC contact sheets and from the MVCRC mailing list.

Type of School	# of MVCRC users	% of MVCRC users who responded
Vocational	16	27.6
Comprehensive	16	27.6
Town Vocational	7	12.1
Other High School	8	13.8
Non-High School	11	19.0
TOTAL	58	100.0

Table 3.7 shows that the MVCRC serves primarily educators in vocational and comprehensive high schools, and to a much lesser degree educators in occupational programs in other public high schools. The Center is also used by educators who work in non-school settings.. Nearly one-fifth of the sampled users work someplace other than a high school.

Table 3.8 below shows the job titles of MVCRC users who responded to the survey. The "Other" category includes vocational counselors, librarians, curricula developers, speech pathologists, bilingual specialists, college professors and other professionals.

TABLE 3.8: Responding MVCRC users by job title.

This table includes only respondents who were randomly selected from MVCRC contact sheets and from MVCRC mailing lists.

Job Title	# of MVCRC users	% of MVCRC users who responded
Secondary Teacher	31	54.4
Administrator	11	19.3
Other	15	26.3
TOTAL	57	100.0

One case is missing from table 3.8 due to unknown title.

Table 3.8 shows that slightly more than half of MVCRC users who responded are Vocational or Occupational education teachers. Nearly one-fifth of sampled MVCRC users are school administrators and more than one-fourth of sampled users have other job titles. These numbers in conjunction with figures presented in the previous section indicate that while the MVCRC serves many teachers throughout the state, the Center also serves many others besides teachers.

Table 3.9 below shows the vocational or occupational area that sampled MVCRC users work in. The "Other" category includes users who work in a house of correction, or teach pre-vocational, ESL, occupational ed., college vocational ed., or alternative high school subjects.

Table 3.9: Responding MVCRC users by vocational or occupational area.

This table includes only respondents who were randomly selected from MVCRC contact sheets and from MVCRC mailing lists.

Area	# of MVCRC users	% of MVCRC users who responded
Agriculture	1	1.7
Business	2	3.4
Distributive Ed.	2	3.4
Health	1	1.7
Home Ec.	7	12.1
Industrial Arts	3	5.2
Technical	5	8.6
Trade and Industrial	16	27.6
Pre-vocational	2	3.4
General Administrators	4	6.9
Vocational Counselors	3	5.2
Other	8	13.8
Unknown	4	6.9
TOTAL	58	100.0

Table 3.9 shows that the MVCRC provides services to educators in many different areas, although more educators in the Trade and Industrial area use the Center than educators in other areas.

Table 3.10 below reports the sampled MVCRC users by geographic region. Users who do not work in high schools are reported as a seperate category.

TABLE 3.10: Responding MVCRC users by Geographic Region.

This table includes only respondents who were randomly selected from MVCRC contact sheets and from the MVCRC mailing list.

Geographic Region	# of MVCRC users	% of MVCRC users who responded
1. Greater Boston	17	29.3
2. North East	14	24.1
3. South East	10	17.2
4.Worcester Area	4	6.9
5. Springfield Area	1	1.7
6. Western Mass.	1	1.7
7. Non-School	11	19.0
TOTAL	58	100.0

Table 3.10 shows that 71% of all randomly selected MVCRC users come from Regions 1,2, or 3, which are the Eastern regions. Another 19% are non-school users. Only 10% of MVCRC users come from the Western part of the state. These figures are not fully consistent with the results reported in Table 3.6. According to those figures, we would expect the number of users from the Western part of the state to be somewhat higher than reported in Table 3.10. This discrepancy can be attributed in part to the relatively small sample of MVCRC users and the low number of respondents from the Western regions. Clearly there are also fewer total numbers of vocational educators in the Western areas. We must conclude that the use of the MVCRC by educators in the Western parts of the state is certainly not as high as by educators located closer to the Center, although we

cannot be certain of the magnitude of the difference of use between the geographic groups.

3.4 THE USE OF CURRICULUM RESOURCE MATERIALS

This section highlights the use of curriculum resource materials by the survey respondents, as indicated by the response to the first question on the questionnaire: " Have you obtained curriculum resource materials in the past two years?"

Table 3.11 shows the number of respondents who said that they obtained curriculum resource materials in the past two years, reported by population sampled: either randomly selected from Vocational, Industrial Arts, Business/ Office and Home Economics lists, or from the MVCRC mailing lists and contact sheets.

TABLE 3.11: Use of Curriculum resource materials by population sampled. (column percentages are shown in parentheses)

Obtained Materials?	Population Sampled		
	Voc or Occ Teachers	MVCRC lists	TOTAL
NO	39 (26.2)	5 (8.8)	44 (21.4)
YES	110 (73.8)	52 (91.2)	162 (78.6)
TOTAL	149	57	206

Among the randomly selected teachers about three-fourths said that they obtained curriculum materials in the past two years. Among MVCRC users more than 90% obtained materials in the past two years, even though MVCRC user contact sheets were sampled back to 1980.

The MVCRC was cited most often as the source of the most useful materials. 38% of randomly selected teachers who obtained curriculum resource materials in the past two years indicated that they obtained their most useful materials from the MVCRC. Of those selected from MVCRC lists, 56% answered that they obtained their most useful materials from the MVCRC.

The second most cited source of useful materials were publishers. 35% of randomly selected teachers and 31% of MVCRC users said that they obtained their most useful materials from publishers.

3.5 PERCEIVED USEFULNESS OF THE MVCRC

This section describes the perceptions of respondents who have used the MVCRC in terms of the Center's usefulness and responsiveness. All respondents who have used the MVCRC were pooled to compile the results of this section, as well as the next section which deals with the ways in which the MVCRC can be improved. This means that teachers are slightly overrepresented, but statistical tests indicate that no significant differences exist between the randomly selected teachers who have used the MVCRC and the MVCRC users obtained from contact sheets and the Center's mailing list along these variables.

Table 3.12 summarizes the choices of all respondents who answered the question "How useful were the curriculum resource materials or services that you obtained from the MVCRC?". There were four possible choices:

a.extremely useful
b.quite useful
c.not very useful
d.not at all useful

The results in table 3.12 are reported by respondents' vocational or occupational area.

TABLE 3.12: How useful were curriculum materials obtained from MVCRC, reported by Vocational/Occupational Area.

(Row percentages are shown in parentheses)

Area	Extremely Useful	Quite Useful	Not Very Useful	Total
Health	3 (50.0)	3 (50.0)	-	6
Home Economics	1 (5.9)	11 (64.7)	5 (29.4)	17
Technical	3 (37.5)	4 (50.0)	1 (12.5)	8
Trade and Industrial	20 (38.5)	26 (50.0)	6 (11.5)	52
All Others	10 (26.3)	25 (65.8)	3 (7.9)	38
TOTAL	37 (30.6)	69 (57.0)	15 (12.4)	121

The majority of respondents who have used the MVCRC found the center's materials or services quite useful, and nearly one-third found the materials or

services extremely useful. Results in table 3.12 show that the one group that found the MVCRC materials or services less useful than the others is Home Economics. In that group 29% responded that materials or services were not very useful, and only 6% responded that materials or services were extremely useful.

Respondents were also asked to rate the responsiveness of the MVCRC staff. These results are overwhelmingly positive: 103 respondents (85% of those answering the question) thought that MVCRC staff was extremely responsive in providing materials or services, and all others responded that MVCRC staff was quite responsive. This clearly illustrates the high level of quality and support provided by the Center's staff. Of all the survey respondents, not a single one expressed dissatisfaction with the MVCRC personnel.

3.6 HOW CAN THE MVCRC BE IMPROVED

Question 5 of the survey solicited respondents' suggestions regarding how to improve MVCRC services. Four choices of answers were provided, and respondents could also write in their own suggestions. This question drew many more write-in responses than any other question on the survey.

Table 3.13 reports the number and percentage of respondents who checked the following two responses in answer to the question "How can the MVCRC improve its services for them to be more useful to you?":

1. Obtain more resources in my subject area
2. Obtain more up-to-date resources in my area

These were the two choices cited most often by the respondents. Again the results are reported by the vocational or occupational area of the respondents.

TABLE 3.13: How can MVCRC improve its services, reported by area.

(% of respondents in each area choosing response is shown in parentheses)

Area	# checked obtain more resources	#checked obtain up-to-date resources
Health	3 (37.5)	5 (62.5)
Home Eco.	15 (75.0)	12 (60.0)
Technical	2 (20.0)	4 (40.0)
Trade & Ind.	29 (47.5)	29 (47.5)
All Others	16 (45.7)	10 (28.6)
TOTAL	65 (48.5)	60 (44.8)

Nearly half of all those responding to the question checked that the MVCRC should obtain more resources, and 45% checked that the Center should obtain more up-to-date resources. Respondents in the area of Home Economics had the highest rates of response to these two choices, with 75% and 60% of respondents checking the two choices. A substantial number of respondents felt that the resources of the Center could be improved in their area by acquiring more up-to-date materials. This is particularly true in the area of Home Economics.

Smaller numbers of respondents checked other choices to the question of how to improve MVCRC. 24 respondents (18% of all responding to the question) checked the choice "Expand hours of operation". Of these, 8 responded to keep the MVCRC open until 5PM or later and 6 responded to keep the MVCRC open on Saturdays. No other respondents chose specific hours. According to these

responses, the hours of operation do not emerge as a major concern of users. A few respondents indicated that distance, rather than time was a factor, and a few others noted that they used the Center by telephone and therefore time of operation was not an issue with them.

Twenty respondents (15% of all responding to the question) checked the choice " Install electronic bulletin board/library". It was the choice selected by the fewest number of respondents.

In addition to these responses, a number of respondents provided their own suggestions for improving MVCRC. Seventeen respondents wrote in to "Provide a list of what is available in my area". This is a significant response for a write-in answer, and ought to be given serious consideration.

Nine respondents wrote in that the MVCRC location is not convenient. These respondents were from Southern and Western Mass. Some of the more emphatic written in responses stressed this point. Clearly this suggestion is difficult to address, but given the relatively low number of respondents from the Western parts of the state, this represents a significant source of dissatisfaction with the Center among educators located far away.

3.7 THE MVCRC MAILING LIST

Nearly all respondents (95%) who have never used the MVCRC expressed an interest in being put on the Center's mailing list and in receiving information about the center. This list of 90 respondents with the names and addresses has been forwarded to the MVCRC.

The responses received by educators sampled from the MVCRC mailing list indicate that the list has not been used extensively in the recent past. Of the 30 responses from the people on this list 10, or fully one-third, indicated that they wanted to be put on the list. Written notes included: " I was on the list, but have not

received information lately", and "Please confirm that I am still on the mailing list". One respondent sampled from the list said that he has never heard of the MVCRC. The 10 respondents from the mailing list who wanted to be put on the list are not included in the 90 names forwarded to the MVCRC, since they are already on the mailing list.

3.8 SUMMARY OF SURVEY RESULTS

This section summarizes the main results presented in more detail in the previous sections. Overall conclusions based in part on these results and in part on interviews and other sources of information about the MVCRC appear in Chapter 5.

The survey results show that nearly half of all vocational and occupational teachers in the state have used the MVCRC. This illustrates that the MVCRC is successful in reaching its primary constituency, the teachers. The results also show that less than 20% of all teachers have never heard of the MVCRC, which means that four-fifths of all vocational and occupational teachers have at least heard of the Center. The MVCRC is more well known and more utilized by teachers in Vocational Technical schools, particularly those located in Eastern sections of the state. The use of the Center by teachers in the Western sections is difficult to determine due to a low number of returns from those areas. However it does appear that a fairly substantial number of teachers from Western sections have heard of and used the MVCRC, although a number of these teachers indicated their preference for a curriculum center that would be more centrally located than the MVCRC.

The survey results also show that other educators and professionals besides teachers also use the MVCRC. Nearly one-fifth of the Center's users surveyed indicated that their position is someplace other than a high school. While the

MVCRC caters primarily to teachers, many school administrators and non-school professionals also use the Center.

Nearly eighty percent of the survey respondents said that they have used curriculum resource materials in the past two years, and the single most popular source of useful materials was the MVCRC. The only other source of materials that came close to the popularity of the MVCRC was publishing companies.

Eighty-eight percent of respondents found the MVCRC materials quite useful or extremely useful. Only Home Economics teachers found the materials and services provided by the Center to be less useful than other teachers. Every single respondent said that MVCRC staff was extremely responsive or quite responsive. This clearly illustrates the consistently high level of support provided by members of the Center's staff.

Respondents felt that the MVCRC could best be improved by providing more resources and more up-to-date resources in specific subject areas. Many teachers in all areas chose these responses, but Home Economics teachers had by far the highest rate of selecting these two choices. A large number of write-in responses suggested that lists of what is available in specific areas should be provided.

Many respondents who had not used the MVCRC indicated their desire to be placed on the mailing list, however there were indications that the list has not been utilized recently. A number of respondents already on the list did not know if they were on the list or not because they had not received information from the Center in some time.

Chapter IV

Interview Results

A third source of data used in the conduct of this evaluation of the MVCRC was interviews with people around the Commonwealth who are knowledgeable both about the Center and the condition of vocational education in the state. Two sets of interviews were conducted. One was with each of the three professional staff members of the MVCRC. The second set of interviews was with "key informants," that is people who were in key positions to comment on the Center and on its strengths and weaknesses.

In this chapter we describe the methods used in and results of these interviews. In terms of results we have divided the discussion into five sections: 1) the background of people interviewed ; 2) their familiarity with and use of the MVCRC ; 3) the perceived strengths of the MVCRC ; 4) the perceived weaknesses of the Center and 5) the priority which our interlocutors would give to strengthening the MVCRC and vocational education curriculum development generally.

4.1 Methods

To carry out this part of the evaluation, we had to do four things. First, we needed to determine who to interview. Second, we had to decide on the specific questions to be addressed in the interviews. Third, we needed to arrange and actually conduct the interviews. Finally, results of the interviews had to be analyzed and reported.

To determine who to interview as "key informants," we adopted the following strategy. Three different individuals were asked to nominate people as key informants for our study, that is people who were knowledgeable about the

MVCRC and in a position to comment on the strengths and weaknesses of the Center. The three people aksed for nominations were Virginia Day, the MVCRC Librarian, Janet Smizer, the MVCRC Inservice Coordinator and John McDonagh, the Director of the Bureau of Planning, Research and Evaluation for the Massachusetts Department of Education's Division of Occupational Education. Mr. McDonagh is the project officer for both the MVCRC itself and for this evaluation study of the MVCRC. Altogether, more than forty different names were nominated via this process. After collating, these names were reviewed by project staff in consultation with the project officer and a final list of sixteen people whom it would be very desirable to interview for the puposes of this study was identified. Since this number was greater than the number originally proposed for this evaluation study, it was decided to proceed with this number of interviews, and to drop the review of vocational education curricula at selected schools which was originally proposed for the evaluation study (p. 13 of the original evaluation proposal). Our thinking in making this change was that it would be possible via the key informant interviews to acquire information on the way in which the services of the MVCRC had influenced the curriculum at schools with which the key informants were familiar.

Our second step (actually carried out in conjunction with the first) was to create a protocol for conducting the interviews and try it out. This was done in July, and on July 29, 1986 letters were sent out to each of the people we sought to interview as key informants. With this letter we sent a list of questions we sought to discuss, dealing with:

- background of the interviewee
- their familiarity with and past use of the MVCRC
- their views on the strengths of the MVCRC
- their views on theweaknesses of the MVCRC; and

- their general views on vocational education curriculum development, dissemination and state role.

Following the introductory letter, each of the key informants was called to arrange a time for an interview. Most of the key informant interviews were carried out in August (four had to be done in September because of scheduling difficulties). Appendix 3 contains a copy of our introductory letter and a list of the people interviewed.

All interviews, except one, were carried out at the interviewee's school or work site. In the case of the one exception, scheduling difficulties prevented a face-to-face interview, so a telephone interview was arranged. All interviews were conducted by the same evaluation project staff member so as to insure consistency in the interviews. Interviewees were ensured that in reporting the results from the interviews, individual comments would not be associated with individual people's names. So as to further help encourage candid discussion, interviews were not tape-recorded. Rather the interviewer took extensive notes, which were selectively transcribed and analyzed by coding for common themes.

In the following pages reporting the results of the key informant interviews, we focus on the results of 15 interviews with people not directly connected with the MVCRC. One of the originally scheduled key informant interviews was not carried out because the person had left the field of vocational education. The other four interviews (with MVCRC staff members and with the Division of Occupational Education project officer for the Center) are thus not included in the analysis of interview results which follows, but instead have been used to inform other parts of this report.

4.2.Background of Interviewees.

All of the interviewees had extensive background in vocational education in general (with the modal number of years of experience with vocational education in Massachusetts being more than ten years) and with vocational education curriculum development in particular. In terms of current positions, two of the people interviewed were officials in the Division of Occupational Education in Quincy, three were regional team leaders for occupational education, five were superintendent-directors or assistant directors of vocational schools, three were curriculum coordinators for coordinators or area team leaders in their schools, at least three were currently presidents of vocational education professional groups, and at least nine were currently, or in the recent past, directly involved in one or more statewide vocational education curriculum development projects.

4.3 Familiarity with the MVCRC

All of our interviewees were familiar with the MVCRC. All but one had personally visited the Center, and had made personal use of the services of the Center. Three were current or past members of the MVCRC Advisory Committee.

People interviewed had used virtually the whole spectrum of services offered by the Center. They had visited the Center to review curriculum materials and software. They had borrowed materials both by mail and in person. They had taken advantage of the Center's on-line data base searching and almost all had attended one of more workshops presented by Center staff. Moreover, all of the people interviewed had received copies of the Center's newsletter, and most had actually distributed copies of the newsletter to other vocational educators.

In response to queries about familiarity with the MVCRC, three other kinds of use were mentioned. Three of the people interviewed mentioned teaching

graduate courses on vocational education (at Fitchburg State, Westfield State and Framingham State colleges) and as part of their graduate courses reported having students use the services of the Center. Most of the people interviewed also commented on their recommending the use of the Center to other people. Finally, several of the people with whom we talked spoke of their involvement in special curriculum development projects (for example, developing one or more volumes for the Competency-Based Vocational Education project), and they almost invariably commented that one of the first things they did in developing new vocational curriculum materials in a particular area was to visit the MVCRC to see what else had been previously done in that vocational area.

4.4 Strengths of the MVCRC

Our interlocutors were also asked about their views on the strengths of the MVCRC. Notes on people's views about strengths were typed up and we attempted to analyze the patterns apparent in the comments, by coding them as being relevant to different aspects of the Center's operations, namely:

General

Staff

Services

Materials collection

Other aspects of the Center's operation (workshops, newsletter, etc.)

Before reporting the findings from this analysis it should be noted that it was often not possible to unambiguously classify a comment as pertaining to only one aspect of the Center's operation. People often would make comments such as "the staff and service of the Center are excellent," and such a comment obviously coud be classified as pertaining to both staff and services. However, so as to avoid double counting we sought to classify each comment under only one rubric.

With this general caveat in mind, we can report that of the nearly 50 specific comments received as to strengths of the Center, the most frequent sorts of comments were: 1) general comments; 2) comments regarding the staff of the Center; and 3) comments regarding the coordination afforded by the Center. More than ten people made very general comments regarding the strengths of the Center. Examples of this sort of comment are: "That it exists at all is a prime strength," "It's truly helpful. The Center really reaches out to all role groups," "It's a very good thing for the schools to have available," and "I think it's excellent. It's really a model of the sort of thing that should be done more, both here in Massachusetts and elsewhere." Perhaps the most graphic statement of general support for the Center came in the following comment from the superintendent-director of a vocational school:

> If they were even thinking about closing the Center, I would be screaming bloody murder, and so would lots of others.. It's the only resource in the whole state that is really providing help for vocational/occupational education.

The second most common type of comment concerning the strengths of the MVCRC pertained to the its staff and services. Here is a sampling of comments along these lines:

> The people working at the Center really take the time to help you find what you want.
>
> The personnel, their enthusiasm and knowledge [are strengths]. They are always looking for new ways to serve you.
>
> The [MVCRC] staff is extremely cooperative and helpful.
>
> The [MVCRC] staff couldn't be any more accomodating.

In addition to general comments about the staff of the Center, each of the three professional staff members of the Center was mentioned specifically by name. Most often mentioned was Carol Laughlin, the Director of the Center. She was

described as being "extremely knowledgable," and "a good strong person to be running the Center". Another person interviewed elaborated on his views of Laughlin's contribution to the Center:

> Carol brings tremendous assets to the Center -- though she has really developed it to the point that it would continue to function well even if she left.

The other two professional staff members of the Center, Virginia Day and Janet Smizer, were also mentioned by name, in the following comments:

> Virginia is terrific -- a very professional and knowledgable librarian who will always go out of her way to help you find what you need.
>
> They really go out of their way to make contacts. I recall that one time Janet drove out to Western Mass -- more than a two hour drive -- for a night meeting to meet with a group of only ten people. That's a l**ll* long drive at night to meet with just ten people.

The third most commonly cited strength of the MVCRC pertained to its coordinating role, with regard to both the state's Division of Occupational Education, and with regard to other agencies. Here is a sampling of comments in this area:

It's valuable that the Center has a close relationship with the State.

> It's good that the CRC is involved with a number of other states so that what we're doing here in Massachusetts is connected with what's going on elsewhere.
>
> The Center's networking with other organizations is really important.

Beyond these three areas -- general strengths of the Center, its staff and its role in coordinating with other agencies both within and outside Massachusetts -- other comments pertaining to the strengths of the Center were more varied. They dealt with the Center's materials collection (3 comments), its facilities and location (3 comments), and its public relations materials, 800 telephone number, system of sending out mailback envelopes for easy return of materials, workshops, newsletter and focus (1 comment each). Under the "focus" rubric we refer to a comment

suggesting that "At least a few [vocational school] academic teachers are beginning to see how useful the Center can be."

4.5 Weaknesses of the Center.

Our next questions pertained to perceived weaknesses. In this part of the discussions, people offered around 50 different comments. However, the rough equivalence between numbers of comments concerning "strengths" and those concerning "weaknesses" should certainly not be misconstrued. The people with whom we talked were far more positive than negative in their views concerning the Center. Indeed, in two cases, after we asked about weaknesses of the Center, the people with whom we were talking were obviously reluctant to respond until we elaborated, to indicate that we were seeking people's views on both weaknesses and suggested improvements. In another case, the person we were talking with stressed twice that in offering suggestions he did not mean to be critical because he thought the work of the Center had been "really excellent". Additionally, as will become evident, many of the comments people offered under the general topic of "weaknesses" or "suggestions for improvements" clearly derived from their concern for extending the benefits of the Center.

As with comments concerning "strengths," we sought to analyze comments concerning "weaknesses" or "suggested improvements," in order to identify general patterns among them. This analysis suggested that the commonly mentioned perceived weaknesses dealt with 1) the focus of the Center, 2) Center facilities and location, 3) resources available to the Center, 4) services of the Center, and 5) the materials collection.

Under the general rubric of "focus" (thirteen comments), two quite different concerns were voiced. On one hand some people felt that the scope of the Center should be broadened to provide more materials concerning the teaching of

academic skills and clusters of occupations. Here are two comments along these lines:

> The CRC should have more academically oriented materials. It is a vocational resource center, but there is a strong and increasingly important emphasis on academics in all vocational programs.
>
> The CRC doesn't have enough material oriented towards clusters of occupations.

On the other hand, however, a couple other people suggested that the Center was already "spreading itself too thin" and perhaps not focusing as closely as it ought to on curriculum resources. The person raising the latter concern suggested, for example, that workshops on safety, while certainly useful, really "wander off the focus on curriculum." One specific lack in the focus of Center efforts was mentioned by three people, namely a "lack of attention and materials for certain occupational areas", with two people specifically mentioning the area of home economics.

In sum then, though there were more than a dozen comments concerning the focus of the MVCRC, some of them were somewhat contradictory, suggesting both a broadening and a narrowing of the focus of the Center's work.

The second most commonly mentioned weakness concerned the location and facilities of the Center. Here is a sampling of comments concerning the Center's location and physical facility:

> Ground floor access to the Center would be nice.
>
> It would be nice if they had a physically separate facility so that people didn't have to go through a school to get to it.
>
> The Center's got a real space problem.
>
> I wonder about its location for people in Western Mass.
>
> A more central location would be good.

The third most commonly mentioned kind of weakness of the Center was simply that it needed more resources. Examples of people's comments along these lines are as follows:

> The Center is probably not getting the resource support it needs.
>
> It probably needs a higher level of funding to keep it's work moving forward.
>
> It needs more staff for outreach and workshops.
>
> More money needs to be spent on advertising what they really have.

The final two kinds of criticisms made by more than a handful of people dealt with the MVCRC services and the materials collection. Concerning services, several people suggested that the Center needed to become more active in peddling its wares and showing teachers how to use them: "Its got to do lots more outreach. It needs to reach out to users more." Another person commented as follows on this topic:

> It's not really a weakness, but the MVCRC could become more effective by not just making curriculum resources available but by showing teachers how they can integrate resources into an existing program.

In commenting on the materials collection, people suggested that the Center needed to become more active in not just collecting but also evaluating (or "validating") curriculum materials, and that "Availability of materials from the MVCRC is sometimes a problem." Two people commented on the problem of getting access to the MVCRC collection of materials. One said that the Center needed to make available more information than just the titles of available materials, and that more copies of the Center catalog needed to be made available.

Additional perceived weaknesses (or suggested improvements) dealt with the MVCRC's workshops, publicity, utilization, and coordination with other agencies (two or three comments each). The general message of these comments

was that the MVCRC is not now used as much as it should be, that more publicity concerning the Center is needed, that more workshops should be offered, and that more coordination with the six regional offices would be helpful. These last comments it seems to us should probably be classified as "more would be better" criticisms, in that the Center's work was praised on each of these points, sometimes by the very same people making the "more would be better" kinds of comments.

4.6. General View on Vocational Education Curriculum Development

The last portion of each interview was devoted to interlocutors' general views on vocational education curriculum development and on the priority which ought to be placed on curriculum resource support, such as that provided through the MVCRC, relative to other needs of vocational education in the Commonwealth of Massachusetts. The general trend of these discussions was that people with whom we talked viewed curriculum development as an extremely high priority with respect to improving vocational education. The only other major needs of vocational education in the state which were mentioned were: 1) the need for new vocational education teachers and their preparation; 2) the need for increasing the visibility and prestige associated with vocational education in the state, and 3) the need for upgrading and modernizing vocational education equipment and facilities.

Given that other needs of vocational education were identified, why the apparent priority placed on curriculum development? Two general reasons were advanced. First, and most obvious, as one of our interviewees put it, is that the "half-life of vocational education curriculum is much shorter than that of academic curricula." This is because of the fast pace of technological change, and the need for curricula to change in order to keep up with the pace of change in the vocations for which students are being prepared.

The second reason for the apparent priority placed on curriculum development was both more subtle, and, we think, more important. A large number of the people with whom we talked clearly viewed curriculum development as an ongoing process, at the heart of vocational education. To them it was clear that curriculum development was not simply a matter of putting down on paper what was to be taught. Instead it was viewed as a much more active process, in which teachers considered not just what was to be taught but also how it was to be taught and how it was to be evaluated. Thus it was clear that curriculum development was viewed as including matters of staff development and evaluation, as well as issues of course content.

Our own perspective is that this is an unusually sophisticated view. Too often what is tested or evaluated is seen as a matter almost altogether separate from curriculum. The view that curriculum development includes staff development and issues of evaluation seems to us a very wise one. And from this point of view we very much agree with the apparent priority which would be placed on curriculum development by the people with whom we talked.

Chapter V

Conclusions and Recommendations

This evaluation study of the MVCRC has been based on several different sources of information, including a statewide survey of vocational educators, interviews with key vocational educators around the Commonwealth, interviews with MVCRC staff, review of MVCRC records and a brief comparison of the MVCRC with similar institutions in other states.

Since the detailed results of our data-gathering and analysis in each of these areas has been presented in previous chapters, in this concluding chapter we simply sum up our overall conclusions and set out recommendations based on evaluation results. Conclusions are discussed in two broad categories, concerning specific MVCRC objectives over the last three years, and the more general role of the MVCRC in improving vocational educational curricula. Similarly, recommendations are divided into two parts: specific recommendations and issues which deserve further consideration.

5.1 The MVCRC Has Met Its Objectives over the Last Three Years

As recounted in chapter 2, the MVCRC has had seven specific objectives, as expressed in its funding proposals for the past three years. These have been:

1. To collect and catalog vocational curriculum resources

2. To provide staff training

3. To continue the network and communication system . . . to share information about the materials and services of the Center and other program improvement efforts of the DOcEd

4. To assist the DOcEd with the research, staff training and dissemination phase of products sponsored/ developed by the Division. . .

5. To provide support services for the technical committees established by the DOcEd . . .

6. To encourage the use of the . . . Principles of Technology Project.

7. To join the Vocational Technical Consortium of States . . .

As mentioned in chapter 2, the last three of these objectives were set out for the Center only for the 1985-86 fiscal year. The other four objectives were, however, common to all of the last three years.

The results of our evaluation indicate that the MVCRC has successfully met these objectives. The Center has collected and cataloged over 4500 items of vocational curriculum resources including, books, curriculum guides, teaching guides, educational software and other instructional materials. The Center has provided staff training both through its workshops, presentations at the annual Professional Development conference, and through assistance provided to vocational educators who have visited the Center. Also it was apparent that in addition to the direct training services provided to educators, the curriculum materials provided by the MVCRC to vocational schools often have provided bases for training and inservice programs carried out in individual schools. Even less directly, but nonetheless important, the MVCRC has contributed to staff training in two other ways. First, visits to the MVCRC have been a regular part of graduate courses in vocational curriculum development offered by at least three institutions of higher education (Fitchburg State, Westfield State and Framingham State). Second, we heard from several people that teams of educators working to develop

new curriculum materials as part of the Competency Based Vocational Education (CBVE) project have very often initially drawn on the pre-existing curriculum materials collected at the MVCRC. Thus to the extent that CBVE project is providing training to vocational educators, the MVCRC has partially contributed to this training.

The Center also has provided a variety of networking and communication services, for example, via its newsletter, toll-free 800 number, and via referrals to other education and social service agencies. An indirect indication of the extent to which the MVCRC has effectively provided a network of communication with other agencies is the fact that nearly one-fifth of the MVCRC users responding to our survey indicated that their positions were someplace other than a high school.

Clear signs of the extent to which the MVCRC has provided a network of communication for vocational educators are that 1) nearly 80% of respondents to our statewide survey of vocational educators indicated that they knew of the MVCRC, and 2) nearly half of the vocational and occupational teachers in the state have used the MVCRC within the last two years. Also noteworthy is the finding that of the 80% of responding educators who said they have used curriculum resources in the past two years, the single most popular source of the most useful materials was the MVCRC. In this regard it is worth noting that in our interviews, two informants suggested that institutions of higher education were not nearly as useful a source of vocational curriculum resources as was the MVCRC.

The Center has also provided the Department of Education's Division of Occupational Education with research, staff training, and dissemination assistance in connection with products sponsored or developed by the Division. The Center's newsletter Curriculum Currents has, for example, regularly publicized Division sponsored projects (with an article on the CBVE project in the 1/86 issue and one on V-TECS in the 9/85 issue). Similarly the latest newsletter (6/86) featured an

article about the Principles of Technology project. Apart from the newsletter, the Center has provided dissemination assistance concerning Division sponsored projects through materials dissemination at the Center and via Center workshops (for instance the Center held a Principles of Technology workshop in August 1986) . Additionally, we have learned that the MVCRC has provided direct research assistance to department officials, for example by doing special database searches in connection with Division projects. (We have not however attempted to document all such direct assistance provided to Division officials).

5.2 MVCRC's Contribution to Vocational Education Improvement.

Apart from the specifics of the MVCRC's meeting of its own objectives, a broader question we sought to address was the extent to which the Center has contributed to curriculum and program improvement in vocational and occupational offerings in the state. On this broader question direct evidence was harder to find. There is considerable indirect evidence that the MVCRC has had a positive impact in this regard, for example in our findings that the Center staff were rated highly in our key informant interviews, that several of our key informants viewed the mere existence of the Center as an asset to vocational education in the state, that 88% of our survey respondents who had used the Center rated its materials and services as quite useful or extremely useful, and that survey respondents rated the MVCRC as the source of choice in acquiring useful curriculum resource help. (In this regard however it should be noted that the Center appears to have been less successful in reaching and providing help to occupatinal specialty teachers than to vocational specialty teachers, as indicated in both survey and interview results). Moreover, it is certainly worth noting that every single respondent to our mail survey who had used the Center rated its staff as extremely responsive or quite responsive.

It seems plausible to infer that such highly rated services have contributed to vocational program improvements. However, when key informants were asked if they could give examples of programs which had been clearly changed as a result of MVCRC services, they tended to give somewhat equivocal answers. Newton North High School, for example, was mentioned by two people as a school whose vocational program curriculum reform was greatly aided by the materials and services of the MVCRC. Another example cited was in Leominster. One informant commented, "When I saw what they were doing with the Principles of Technology Project in Leominster, it just blew my mind." According to this source, the MVCRC was one resource in helping this school get started on an important curriculum reform, but it was by no means the only source of influence.

A third case cited in response to our queries about where MVCRC services had led to program changes was the South Shore Vocational Technical School. According to this account, when the South Shore school was getting started on a curriculum reform effort based on the CBVE project, "Every one of our people involved in CBVE went there [to the MVCRC] to get started. But that was only a start." According to this source, the new curriculum at the South Shore school has led to real improvements in the programs offered there. However, this individual stressed that the reform was not something that the school simply adopted from the MVCRC, the CBVE project or anyplace else. "The worst thing we could possibly have done is to have adopted a prepackaged, canned curriculum."

In the view of this informant and indeed in the view of several other people with whom we talked, this idea was stressed. It was the view that real program improvement comes about not through the adoption of any ready-made curriculum, but rather through the active involvement of staff at a particular school, in taking curriculum ideas and resources from a variety of sources, adapting them and building on them to create their own program.

This view is, we think, entirely appropriate. The literature on the diffusion and adoption of innovations (e.g. Rogers, 1983), clearly indicates that for meaningful social change to take place, innovations are not merely adopted, but are in effect adapted to or "reinvented" in a new setting. In other words, for a meaningful curriculum reform to take place in a school, the teachers and staff of the school have to create the curriculum for themselves. In this sense, as one of our informants put it, staff development is an integral part of curriculum reform. "Curriculum reform without staff development, staff creation of the new curriculum, is meaningless."

In this sense, the ambiguity of evidence concerning the effect of MVCRC services on vocational program offerings is none too worrisome. From this perspective, it is entirely appropriate that the MVCRC was not once cited as a direct or immediate source of program improvement, but instead as a starting point, together with a variety of other resources (such as the CBVE and Principles of Technology projects), from which the educators took off to create new curriculum for themselves.

5.3 Recommendations

Despite our overall conclusions that the MVCRC has been successful in meeting its objectives over the last three years and has been providing useful and quite appropriate, though indirect, aid in the improvement of vocational program offerings in schools, we nevertheless can offer several suggestions with regard to how the Center's operations might be improved in the future. Before setting out our specific recommendations we should mention that several of them might well require that additional resources be devoted to the work of the Center. In this regard it is worth noting that the one of the most commonly cited weaknesses (or needed improvements) in the Center in the views of our key informants, as

recounted in chapter IV, was that more resources need to be devoted to the work of the Center. Additionally it is worth mentioning that two of our informants expressed the view that while the Center has been supported in the past with federal monies, the state ought to be investing some of its own money in the Center, particularly since there are likely to be cutbacks in federal funds for education in the future. We do not set out here a specific recommendation in this regard, for we have not attempted to do a detailed cost analysis of the Center's past expenditures or to analyze the implications of using earmarked federal funds versus using state monies to support the Center. What is more, we have not attempted to estimate the financial or resource implications of the recommendations described in this section of our evaluation report. However, in general our view is that the Center seems to have proven sufficiently successful that additional resources could very well be devoted to the work of the Center. Given this general, albeit vague, recommendation we have attempted to organize our recommendations from the relatively minor to the major in terms of the resources that likely would be required to fulfill them.

1. The Center's newsletter should be issued on a more regular and frequent basis. Three factors lead to this recommendation. One is simply the sporadic basis on which the newsletter has been issued in the past. The second is the recommendation by some of our key informants that more publicity be devoted to the Center and its services. As one informant put it, people know about the Center, but they need to be reminded of it so they think of it when they need help. The third is the finding from our mail survey that many of the people already on the newsletter mailing list asked to be put on it -- apparently thinking, perhaps because they had not received a newsletter for several months prior to receiving our survey in the mail, that they were no longer on the mailing list.

2. The Center needs to adopt a differentiated but more detailed mechanism for publicizing available materials. This recommendation stems from several considerations. First, one complaint among key informants was that too few catalogs of the Center's collection are made available to schools. A second is that vocational educators would like to have more information on what is avilable from the Center than simply the titles of items in the collection. The obvious impediment to rectification of both of these problems is cost. The current catalog of Center holdings now runs to more than 270 pages and printing a great number more of this catalog, or printing more information about each item in the collection, would obviously entail a considerable expense. However it seems to us that a greater number of listings of pertinent portions of the collection, possibly including more detailed information on each item could be made available if a differentiated catalog dissemination strategy were adopted. This would entail simply sending only relevant portions of the catalog to appropriate vocational educators, for example to each vocational program chairperson in all vocational schools in the state. This is, incidentally, something that is already partially being done by the Center through its practice of xeroxing relevant portions the the catalog in response to requests for information on a particular vocational program area. Our recommendation here is, in a sense, that the Center simply plan and expand this practice on a systematic basis.

Nevertheless, we do recognize that as long as the Center continues to publicize its holdings via printed hardcopy, this strategy would involve considerable additional expense. Thus in a subsequent suggestion we also recommend that the dissemination of information on the Center holdings in machine readable form be considered.

3. More resources be devoted to updating the Center collection on an ongoing basis. This recommendation stems from two of our findings. One is the finding

recounted in chapter 3 that many survey respondents indicated that the MVCRC could best be improved by providing more resources and more up to date resources in specific subject areas. A second is the finding from our analysis of the Center's collection over time, reported in chapter 2, that the rate of growth in the Center's collection has apparently dropped off considerably in the last two years.

4. More attention be given to providing resource support to occupational specialty teachers. This recommendation stems from several of our findings. One is the recommendation by several key informants that the Center has suffered from inattention to certain occupational areas, with two people mentioning the area of home economics. This view of key informants was confirmed from our survey results , which indicated that home economics teachers found the materials and resources of the Center less useful than did any other vocational educators. Additionally, our review of available materials showed that the Center has only a small collection in the Industrial Arts area.

5. More resources be devoted to providing support to teaching of academic skills in vocational schools. The observation from key informants which most clearly relates to this recommendation is the following comment:

> The CRC should have more academically oriented materials. It is a vocational resource center, but there is a strong and increasingly important emphasis on academics in all vocational programs.

In offering this comment, it should be acknowledged that the Center already has been working in this direction, for example through a separate project and through the Principles of Technology project and its implications for teaching math and science. Also, it should be mentioned that the Superintendent-Director of one vocational school told us that his academic teachers were already beginning to find out how useful the Center's resources could be in developing curriculum resources for teaching academic subjects to vocational students. However it seems to us that

this aspect of vocational education is of such importance, given the increasing pace of technological change and the concommitant need for giving students skills for learning new technologies after they leave school, that it needs to receive high priority in the future work of the Center.

6. The work of the Center in staff development be expanded. This recommendation stems from several specific suggestions of key informants, and our own assessment as to how the Center's work has been most useful in the past in terms of improving vocational program offerings. Two specific types of comments from key informants suggest this. One type of comment referred to the need for more workshops offered by the Center (e.g. The Center "needs more staff for outreach and workshops."). The other comment was that:

> . . . the Center could become more effective by not just making curriculum resources available but by showing teachers how they can integrate resources into an existing program.

The more general rationale behind this suggestion is the view expressed by several informants that curriculum development, if it is to be truly successful, involves not just the adoption of pre-existing curriculum materials, but staff working with available resources to "reinvent" curriculum for themselves and their own schools. Obviously MVCRC staff cannot provide direct staff development assistance to all Commonwealth vocational schools and secondary schools offering vocational programs, but it would seem to be prudent, given the way in which Center services have apparently led to improved program offerings in the past, for more attention to be devoted to the ways in which Center resources can be used, via staff development, to lead to improved program offerings in the future.

5.4 Issues for Consideration.

In addition to setting out specific recommendations for improving the Center's operations, we felt it also worthwhile to describe several additional issues

to which we recommend consideration. The reasons that we do not set out these ideas as specific recommendations are that 1) our evaluation findings suggest the issues as of important concern but lead to no clearcut recommendation or 2) pursuing them seriously would lead to ramifications (either in terms of organization of resource allocation) beyond the scope of this evaluation study.

1. Geographic location of the Center. This was an issue raised in the comments of a number key informants (e.g. in the comments " I wonder about the location for people in Western Mass." and " A more central location would be good."). However despite this sort of concern on the part of key informants, our survey results indicated that a substantial number of teachers from the Western part of the state have heard of and used the MVCRC. Thus we recommend that the issue of the geographical location of the Center is a matter for additional consideration.

2. Mechanisms for coordinating Center activities with Regional offices. As recounted in chapter 4, several informants raised the issue of the need for more coordination of Center activities with the six regional offices of the Department of Education. This seems to us a useful idea, particularly in light of considerable concern about how well the MVCRC, located in Lexington, is serving vocational educators far distant from this central eastern location. Neverthless, our interviews with team leaders in several regional centers indicates that there is already a considerable degree of coordination between the MVCRC and regional offices. Therefore the matter of exactly how the coordination of the MVCRC's services and regional offices might be enhanced is a matter for further scrutiny.

3. Coordination of MVCRC with other state-sponsored projects such as CBVE. This has been a study of the MVCRC and not of other state-sponsored vocational education projects such as the Principles of Technology project and the CBVE project. Nevertheless the study has clearly revealed that the MVCRC often has worked well in coordination with such other state-sponsored vocational education

projects. At the same time, however, the issue of the relationship between the MVCRC and the CBVE project was raised in several of our key informant interviews. In particular it was unclear to several people why, though the MVCRC clearly has the responsibility for vocational curriculum materials dissemination in general, the actual printing and dissemination of CBVE materials is handled through the Greater Lowell Vocational Technical School. This is not an issue which we investigated in any detail, as our study focused on the MVCRC rather than on the CBVE project, but given the questions raised would seem to be a matter worthy of further scrutiny.

4. Resources Devoted to Materials Dissemination. With respect to three different state-sponsored projects, questions were raised by people with whom we talked about why more copies of useful vocational education materials are not made more widely available. In this regard we already have mentioned the dissatisfaction expressed with regard to the MVCRC catalog. The two other cases with which such dissatisfaction was expressed were 1) CBVE materials and 2) the "Toolkit" for new vocational educators. The general message behind such dissatisfaction was that while the Division of Occupational Education had devoted considerable resources to the development of these resources, the Divison was being penny-wise and pound-foolish in not devoting more resources to the printing and dissemination of more copies of such materials. In this regard we should again reiterate that this has been a study of the MVCRC and not of other state-sponsored projects such as the CBVE or Toolkit projects, but we heard sufficient numbers of comments on this issue that we think it one worthy of further scrutiny.

5. Dissemination of Machine Readable Materials. A more general issue worthy of consideration is whether a system might be developed for the dissemination of vocational education materials, both those from the MVCRC and other sources in machine readable form. The idea here is that since there has been considerable

concern expressed with regard to the availability of both materials from the MVCRC and other state sponsored vocational education projects (such as the CBVE and the Toolkit) whether a system might be developed to allow the distribution of materials (both text and database materials) in machine readable rather than hard copy form. There would seem to be two major advantages to such form of distribution, as opposed to printed information. One is that it could be cheaper than the printing and mailing of hardcopy materials. The second is that it might allow materials to be distributed (e.g. on floppy disks) that would allow easier use and adaptation of materials at the local level. Teachers might for instance, if provided with the MVCRC catalog in the form of a database file, be able to quickly search through it to find materials of possible use to them. The main problem with this idea is that among vocational technical schools and other secondary schools offering vocational programs, there is a variety of computer hardware systems being used. In the schools we visited for example, we observed three different computer systems in use (The Apple II, the Macintosh and the the IBM -PC or IBM compatible). Providing datafiles suitable for use in such different hardware and operating systems environments would clearly require that some resources be devoted to data transformations. Moreover the matter of developing a system to allow the transfer of machine readable files is a statewide issue involving all schools, not just vocational schools. Nevertheless two considerations lead us to suggest this issue with regard to the work of the MVCRC. One is that the vocational schools of the Commonwealth seem to us, at least on the basis of visits to a half dozen vocational schools, to be considerably more sophisticated with regard to computerized data-processing than Commonwealth schools generally. Second the MVCRC seems to have been unusually forward thinking, with regard to both its own use of computerized information processing and with regard to introducing vocational schools to the use of new computer technology.

5.5 Postscript

As a final observation, having elaborated on specific conclusions and recommendations resulting from this evaluation of the MVCRC, we think it may be worthwhile to set out some of the more general and subjective impressions with which we are left are the end of our inquiry. Our highly positive assessment of the work of the Center over the past three years should by now be apparent from the conclusions and recommendations previously described. Nevertheless, there is another and less tangible motivation behind our recommendation that the work of the Center be continued and expanded.

It stems from an attitude apparent in many of the vocational educators with whom we talked. This attitude was that vocational education and vocational educators seem to feel somewhat beleaguered. Of course, educators generally doubtless have cause to feel beleaguered of in recent years. Teachers salaries are low -- with college-educated teachers often earning less than garbage collectors. The quality of public education has been widely criticized over the last few years -- with numerous reports proposing myriad reforms for improving our schools.

Still in our conversations with vocational educators around the Commonwealth, not just in our formal interviews, but also often in informal contacts, we sensed a particular feeling of isolation. The focus of recent education reform proposals, both here in Massachusetts and nationwide, has been on the improvement of academic programs. The role of vocational education in the training of the nation's youth is rarely acknowledged, and in being overlooked often seems to be belittled. Also, vocational educators often seem to feel that while the state government agencies in general and the State Department of Education in particular often are cast in the role of mandating reforms and new requirements upon the work of teachers, very rarely do they provide much tangible support to the

teachers and adminstrators -- the "street level bureaucrats," to use a term coined by some scholars of public policy -- who carry the burden of educating our youth.

Thus our endorsement of future investement in the MVCRC stems not just from our evaluation of the good work that it has done in the past three years, but also from our judgment that it seems to embody one of the very few mechanisms available for the state to provide tangible support directly to vocational educators who often seem to feel -- and in our view are -- ill-supported and underappreciated. If secondary vocational education is worth supporting -- and again, in our view it is -- then the MVCRC and agencies like it which provide direct support to vocational teachers are well worth investing in.

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APPENDIX 1

SURVEY COVER LETTER AND QUESTIONNAIRE

BOSTON COLLEGE
CHESTNUT HILL, MASSACHUSETTS 02167

THE CENTER FOR THE STUDY OF TESTING,
EVALUATION, AND EDUCATIONAL POLICY
(617) 552-4521

CURRICULUM ASSISTANCE FOR VOCATIONAL EDUCATORS

The Massachusetts Department of Education, Division of Occupational Education has contracted with the Center for the Study of Testing, Evaluation, and Educational Policy (CSTEEP) at Boston College to conduct an evaluation of vocational curriculum resources used by teachers and other educators in Massachusetts.

You have been selected from all vocational educators in the state to help in the evaluation by filling out the attached questionnaire. We would like you to answer carefully all applicable questions on the questionnaire and to return your completed form to CSTEEP in the pre-paid return envelope we have provided. **The results of the evaluation will be used to improve the availability of curriculum resource materials.** If you need more room to answer any of the items, please write on a separate sheet of paper. Information you provide will be held in strict confidence by our office. No individual names or other information allowing identification of individual respondents will be reported in our analysis, so **we encourage you to be entirely candid in answering the survey questions.**

We appreciate your assistance in this evaluation. We look forward to receiving your completed questionnaire by June 20, 1986. Should you have questions about the evaluation or the questionnaire, please call either Walter Haney or John Zuman at (617) 552-4521. Call collect, if necessary. The Division of Occupational Education contact person for this evaluation is John McDonagh. You may call him at 770-7380.

Sincerely yours,

Walter M. Haney and John Zuman

PLEASE CIRCLE ALL THAT APPLY

Place where you work: _____
Title: 1. Teacher 2. Administrator 3. Other

If Teacher, write subjects taught, if administrator or other write specific title: _____

Area: 01. Agriculture
04. Distribution
07. Health
09. Home economics
14. Business/ Office
16. Technical
17. Trade/ Industrial
99. Industrial Arts
00. Other (please list)

Years of experience as a vocational educator _____

1. Have you obtained curriculum resource materials in the past two years ?
Yes ___ No ____

If **NO** please go on to **question 2**. If **YES**, please answer the following questions:

A. What types of curriculum resource materials have you used these past two years ?

1. Textbooks
2. Teacher guides
3. Magazines
4. Student workbooks
5. Computer software
6. Audiovisual materials
7. Technical manuals
8. Curriculum guides
9. Activity kits
10. Task listings/ Performance objectives
11. Tests, evaluations
12. Other (Please list)

B. Why did you use the materials ?

1. For own professional improvement
2. For inservice/ preservice vocational teacher training class
3. To develop workshop for other teachers
4. Other (Please list)

C. How did you use the materials ?

1. Curriculum development
2. Curriculum refinement
3. Subject matter supplement
4. As part of school curriculum project
5. Safety training
6. Introduction of new technology
7. Career planning
8. Other (Please list)

D. Where did you get the curriculum resource materials from ?

1. Other teachers in your school
2. Teacher in another school
3. Your school's resource room
4. Business, trade, or industry
5. Library outside of your school
6. Resource center outside school
7. Your school's library
8. School administrator
9. Professional association
10. Advisory committee
11. Publishing company
12. Other (Please list)

E. How useful were the curriculum resource materials that you used ?

a. extremely useful
b. quite useful
c. not very useful
d. not at all useful

F.1. What kind of curriculum resource materials have been the <u>most useful</u> to you in the past ?

1. Textbooks
2. Teacher guides
3. Magazines
4. Student workbooks
5. Computer software
6. Audiovisual materials
7. Technical manuals
8. Curriculum guides
9. Activity kits
10. Task listings/ Performance objectives
11. Tests, evaluations
12. Other (Please list)

F.2. Where did you obtain these most useful materials ?

2. Have you ever heard of the Massachusetts Vocational Curriculum Resource Center (MVCRC) located at the Minuteman Regional Vocational Technical School in Lexington ? Yes ____ No ____

If **NO**, please go on to **Question 6.** If **YES**, please answer the following questions:

A. How did you hear of the MVCRC ?

1. Newsletter
2. Fellow teacher
3. School administrator
4. Workshop/ Inservice
5. Dept. of Education regional center
6. Teacher training class
7. University/ College professor
8. Other (Please list)

3. Have you ever used the MVCRC ? Yes ____ No ____

If **NO,** please go on to **Question 4.** If **YES,** please answer the following questions:

A. How have you contacted the MVCRC ?

1. In-person
2. By phone
3. Mail request
4. Workshops
5. Other (Please list)

B. What materials or services of the MVCRC have you used ?

1. Receive newsletter
2. Data base search
3. Inservice workshop given by MVCRC staff
4. Specialized workshop sponsored by MVCRC: for example CAD, Principles of Technology, occupational safety & health
5. Borrowed materials
6. Previewed computer software
7. Previewed audiovisual materials
8. Phone referrals
9. Other (Please list)

C. How useful were the curriculum resource materials or services that you obtained from the MVCRC ?

a. extremely useful
b. quite useful
b. not very useful
d. not at all useful

D. How responsive was the MVCRC staff in providing materials or services ?

a. extremely responsive
b. quite responsive
c. not very responsive
d. not at all responsive

NOW PLEASE GO TO QUESTION 5

* * *

4. Answer this question only if you have <u>not</u> used the MVCRC.

A. Why have you never used the MVCRC ?

1. Do not know what resources are available
2. Do not know how to request services
3. Not interested in instructional materials
4. Have sufficient curriculum materials already
5. MVCRC does not have applicable resources
6. MVCRC does not have up-to-date resources
7. MVCRC location is not convenient
8. MVCRC hours are not convenient
9. Other (Please list)

5. How can the MVCRC improve its services for them to be more useful for you ?

1. Obtain more resources in my subject area
2. Obtain more up-to-date resources in my area
3. Expand hours of operation
4. Install electronic bulletin board/ library
5. Other (Please write below)

A. If MVCRC hours are not convenient, what times/days would be more convenient for you ? (List below)

B. Are you planning to use the MVCRC in the future ? Yes ____
No ____

If YES, for what types of materials or services ?

1. Textbooks
2. Teacher guides
3. Magazines
4. Student workbooks
5. Computer software
6. Audiovisual materials
7. Technical manuals
8. Curriculum guides
9. Activity kits
10. Database searches
11. Task listings/ Performance objectives
12. Tests, evaluations
13. Workshops
14. Other (Please list)

If NO, why not ? (Please write your response below)

THANK YOU FOR ANSWERING THE QUESTIONNAIRE

* * *

6. Answer the following questions if you have not used the MVCRC.

A. Would you like to receive information about the MVCRC ?
Yes ____ No ____

B. Would you like to be on the MVCRC mailing list ?
Yes ____ No ____

If you answered **YES** to A or B, please write your name and address below.

Name _____
Address _____
_____
_____

THANK YOU FOR ANSWERING THE QUESTIONNAIRE

* * *

Please send the completed questionnaire in the stamped mail-back envelope to:

CSTEEP, 531 McGuinn Hall, Boston College, Chestnut Hill, MA 02167

APPENDIX 2

DATA TABLES OF SURVEY RESULTS

MVCRC Questionnaire Summary of Results

This appendix presents the responses of all respondents to the MVCRC survey instrument.

The questionnaire was designed so that respondents could choose multiple answers to many of the questions. The results for each question are presented ranked by the frequency of choice. For each answer the number of respondents choosing the answer is given, as well as the percentage of all those that answered the question who chose each answer. A total of 208 vocational educators answered the survey, but not all questions were applicable for all respondents.

Place where you work:

A total of 99 different schools or non-school locations were listed. Two respondents did not name the place of work.

Title:

169	(81.6%)	Teacher
22	(10.6%)	Other
16	(7.7%)	Administrator
1		Missing

Subject taught or specific title:

A total of 36 different subjects and 12 different titles were listed. 18 respondents did not give a specific subject or title.

Area:

93	(48.2%)	Trade & Industrial
28	(14.5%)	Home Economics
16	(8.3%)	Business
14	(7.3%)	Technical
14	(7.3%)	Industrial Arts
10	(5.2%)	Health
6	(3.1%)	Distribution
4	(2.1%)	Agriculture
2	(1.0%)	Pre-vocational
2	(1.0%)	Occupational ed.
1	(0.5%)	House of correction
1	(0.5%)	Alternative HS subjects
1	(0.5%)	ESL
1	(0.5%)	College Voc Ed.
15		Missing

Years of experience as a vocational educator:

The overall mean years of experience was 12.3 years, with a standard deviation of 6.7. The median years of experience was 11 years.

The average years of experience varies between groups sampled:

	Years of experience	Standard Deviation
Voc teachers	11.9	5.7
MVCRC mailing list	9.2	6.1
MVCRC contact sheets	12.7	8.9
Ind. Arts list	17.0	10.3
Business list	18.9	8.5
Home Ec. list	13.8	6.8

1. Have you obtained curriculum resource materials in the past two years ?

163	(78.7)	Yes
44	(21.3)	No

1A. What types of curriculum resource materials have you used these past two years ?

117	(71.8)	Textbooks
101	(62.0)	Curriculum guides
88	(54.0)	Audiovisual materials
80	(49.1)	Teacher guides
80	(49.1)	Magazines
68	(41.7)	Technical manuals
65	(39.9)	Student workbooks
56	(34.4)	Computer software
52	(31.9)	Tests, evaluations
49	(30.1)	Task listings/Performance objectives
26	(16.0)	Activity kits
9	(5.5)	Other

1B. Why did you use the materials ?

143	(88.8)	For own professional improvement
36	(22.4)	For inservice/preservice vocational teacher training class
17	(10.6)	To develop workshop for other teachers
13	(8.1)	Other

1C. How did you use the materials ?

109	(67.3)	Curriculum development
101	(62.3)	Curriculum refinement
85	(52.5)	Subject matter supplement
52	(32.1)	Introduction of new technology
49	(30.2)	As part of school curriculum project
37	(22.8)	Career planning
30	(18.5)	Safety training
6	(3.7)	Other

1D. Where did you get the curriculum resource materials from ?

97	(59.5)	Resource center outside school
90	(55.2)	Publishing company
78	(47.9)	Business, trade or industry
46	(28.2)	Professional association
42	(25.8)	Your school's library
36	(22.1)	Teacher in another school
32	(19.6)	Your school's resource room
27	(16.6)	Library outside of your school
27	(16.6)	School administrator
23	(14.1)	Other teachers in your school
23	(14.1)	Advisory committee
14	(8.6)	Other

1E. How useful were the curriculum resource materials that you used ?

103	(63.6)	Quite useful
45	(27.8)	Extremely useful
14	(8.6)	Not very useful

1F1. What kind of curriculum resource materials have been the most useful to you in the past?

85	(52.8)	Textbooks
84	(52.2)	Curriculum guides
59	(36.6)	Audiovisual materials
56	(34.8)	Technical manuals
51	(31.7)	Teacher guides
45	(28.0)	Magazines
39	(24.2)	Student workbooks
35	(21.7)	Task listings/ Performance objectives
28	(17.4)	Computer software
22	(13.7)	Tests, evaluations
19	(11.8)	Activity kits
7	(4.3)	Other

1F2. Where did you obtain these most useful materials ?

56	(44.4)	MVCRC
42	(33.3)	Publishing company
14	(11.1)	Libraries
12	(9.5)	Other resource centers
11	(8.7)	Industry/ Business
24	(19.0)	Other

2. Have you ever heard of the MVCRC ?

173	(83.2)	Yes
35	(16.8)	No

2A. How did you hear of the MVCRC ?

70	(41.7)	Newsletter
57	(33.9)	Workshop/ Inservice
38	(22.6)	Fellow teacher
35	(20.8)	School administrator
35	(20.8)	Dept. of Education regional center
31	(18.5)	Teacher training class
16	(9.5)	University/ College professor
14	(8.3)	Other

3. Have you ever used the MVCRC ?

127	(72.2)	Yes
49	(27.8)	No

3A. How have you contacted the MVCRC ?

84	(67.7)	By phone
76	(61.3)	In person
45	(36.3)	Mail request
29	(23.4)	Workshops
6	(4.8)	Other

3B. What materials or services of the MVCRC have you used ?

101	(80.2)	Borrowed materials
80	(63.5)	Receive newsletter
48	(38.1)	Inservice workshop given by MVCRC staff
23	(18.3)	Previewed audiovisual materials
19	(15.1)	Previewed computer software
18	(14.3)	Phone referrals
14	(11.1)	Specialized workshop sponsored by MVCRC
13	(10.3)	Data base search
5	(4.0)	Other

3C. How useful were the curriculum resource materials or services that you obtained from the MVCRC ?

70	(56.9)	Quite useful
38	(30.9)	Extremely useful
15	(12.2)	Not very useful

3D. How responsive was the MVCRC staff in providing materials or services ?

103	(85.1)	Extremely responsive
18	(14.9)	Quite responsive

4A. Why have you never used the MVCRC ?

19	(38.0)	Have sufficient curriculum materials already
17	(34.0)	Do not know what resources are available
16	(32.0)	MVCRC location is not convenient
13	(26.0)	Do not know how to request services
4	(8.0)	MVCRC does not have applicable resources
3	(6.0)	MVCRC hours are not convenient
3	(6.0)	Just called for the first time (write-in)
3	(6.0)	Have not found the time yet (write-in)
6	(12.0)	Other

5. How can the MVCRC improve its services for them to be more useful for you ?

66	(48.9)	Obtain more resources in my subject area
60	(44.4)	Obtain more up-to-date resources in my area
24	(17.8)	Expand hours of operation
20	(14.8)	Install electronic bulletin board/library
17	(12.6)	Provide a list of what is available in my area (write-in)
10	(7.4)	Great as is/ Doing an effective job (write-in)
9	(6.7)	Location is not convenient (write-in)
12	(8.9)	Other

5A. If MVCRC hours are not convenient, what times/days would be more convenient for you ?

6	(25.0)	Saturday
4	(16.7)	7pm
2	(8.3)	9pm
3	(12.5)	Other

5B. Are you planning to use the MVCRC in the future ?

154	(92.2)	Yes
13	(7.8)	No

5B1. If YES, for what types of materials or services ?

100	(67.6)	Curriculum guides
65	(43.9)	Audiovisual materials
63	(42.6)	Teacher guides
60	(40.5)	Computer software
54	(36.5)	Textbooks
47	(31.8)	Technical manuals
43	(29.1)	Task listings/ Performance objectives
33	(22.3)	Activity kits
33	(22.3)	Workshops
30	(20.3)	Tests, evaluations
29	(19.6)	Student workbooks
26	(17.6)	Database searches
22	(14.9)	Magazines
5	(3.4)	Other

5B2. If NO, why not ?

5	(38.5)	Have sufficient materials already (write-in)
3	(23.1)	Beneficial resources unavailable in my area
2	(15.4)	Retiring
3	(23.1)	Other

6A. Would you like to receive information about the MVCRC ?

82	(91.1)	Yes
8	(8.9)	No

6B. Would you like to be on the MVCRC mailing list ?

90	(94.7)	Yes
5	(5.3)	No

A list of names and addresses of the 90 respondents wanting to be on the MVCRC mailing list is attached as Appendix C.

APPENDIX 3

COVER LETTER AND LIST OF KEY INFORMANTS INTERVIEWED

BOSTON COLLEGE
CHESTNUT HILL, MASSACHUSETTS 02167

THE CENTER FOR THE STUDY OF TESTING,
EVALUATION, AND EDUCATIONAL POLICY
(617) 552-4521

July 29, 1986

Dear

The Massachusetts Department of Education, Division of Occupational Education has contracted with the Center for the Study of Testing, Evaluation, and Educational Policy (CSTEEP) at Boston College to conduct an evaluation of vocational curriculum resources used by teachers and other educators in Massachusetts. The evaluation is focusing on the Massachusetts Vocational Curriculum Resources Center (MVCRC), located at the Minuteman Regional Vocational Technical School in Lexington, and on how state-supported vocational curiculum resource dissemination might be improved in the future.

As part of the evaluation, we are seeking to interview key officials and educators around the state. In this connection, we are writing to ask whether we could talk with you for approximately 45- 60 min. about the MVCRC and about how vocational currriculum resource dissemination might be improved in the future. We would like to meet with you, at your convenience, within the next two to three weeks.

In the hope that you will be able to meet with us, we enclose a list of the general sorts of questions we would like to cover. One of us will call you within the next week to arrange a mutually convenient time that we might talk with you. If you have any questions regarding our evaluation study, we will be happy to try to answer them.

The Division of Occupational Education contact person for this evaluation is John McDonagh, Director of the Division's Bureau of Research, Planning and Evaluation. If you have any questions concerning the Division's sponsorship of the study, you may call him at 770-7380.

Thank you in advance for your consideration in helping with our inquiry.

Sincerely yours,

Dr. Walter Haney & Mr. John Zuman

List of key informants for MVCRC Evaluation

Name and address	Date of interview
David Cronin Associate Commissioner Division of Occupational Education Massachusetts Department of Education 1385 Hancock Street Qunicy, MA 02169	8/21/86
Elaine Cadigan Director, Bureau of Program Services Division of Occupational Education Massachusetts Department of Education 1385 Hancock Street Qunicy, MA 02169	8/21/86
Mr. Jim Shiminski Team Leader, Occupational Education Northwest Regional Education Center Mark Hopkins Hall Church Street North Adams, MA, 02147 413-664-4511 x571	9/11/86
Joseph Cangro Team Leader, Occupational Education Greater Springfield Regional Education Center John Ashley School 88 Massasoit West Springfield 01089 413-739-7271	8/28/86
Paul Carbone Team Leader, Occupational Education Central Massachusetts Regional Education Center Beaman Street, Route 140 West Boylston, MA 01583 617-835-6267	8/19/86
Sheila Herbert Assistant Superintendent, Director CBVE Project Greater Lowell Vocational Technical School Pawtuckett Blvd Tingsboro, MA 01871 617-454-5411	8/27/86

William Burns 8/27/86
Project Director,CBVE Project
Greater Lowell Vocational Technical School
Pawtuckett Blvd
Tingsboro, MA 01871
617-454-5411

Wilfrid Savoie 8/21/86
Superintendent-Director
Blue Hills Regional Vocational Technical School
100 Randloph Street
Canton, MA 02021
617-828-5800

Mary Urban pending
David Hale Fanning Vocational School
26 Chatham St.
Worcester MA 011608
617-799-1953

Mr. Cliff Easton
Superintendent Director
South Shore Regional Vocational Technical School
Webster Street
Hanover, MA 02339
617-878-8822

Jim Green 8/18/86
Executive Dircetor
State Council on Vocational Education
State House, Room 193
Boston MA 02133
617-727-0803

Mr. Ron Fitzgerald 8/21/86
Superintendent-Director
Minuteman Regional Vocational Technical School
758 Marrett Road
Lexington MA 02173
617-861-6500

Mr. Walter Welch 8/28/86
Holyoke Public Schools
98 Suffolk Street
Holyoke, MA 01040
413-534-5678

Ms. Joyce Mayln-Smith 9/9/86
Humphrey Occupational Resource Center
75 New Dudley Street
Boston, MA 02119
617-442-5200